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**Between the cracks:
The intersection of individuals, social processes
and creativity after the Canterbury earthquakes
2010-2012**

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submitted in partial fulfilment
of the requirements for the Degree of
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Abstract

This research investigates creativity in a post-disaster setting. The data explore creativity at the intersection of the affected community of Christchurch, New Zealand and the social processes that followed the earthquakes of 2010 - 2012. Personal and contextual influences on creative ideas implemented for community or commercial benefit are also examined.

Viewed as creative, unique approaches to post-disaster problem solving were celebrated locally, nationally and internationally (Bergman, 2014; Wesener, 2015; Cloke & Conradson, 2018). Much has been written about creativity, particularly creativity in organisations and in business. However, little is known with regards to who creates after a disaster, why individuals choose to do so and what impact the post-disaster context has on their creative activity. This exploratory study draws on the literature from the fields of creativity, disasters, psychology, sociology and entrepreneurship to interpret first-hand accounts of people who acted on creative ideas in a physically and socially altered environment.

A mixed method - albeit predominantly qualitative - approach to data gathering was adopted that included interviews ($n=45$) with participants who had been the primary drivers of creative ideas implemented in Christchurch after September 2010 – the first major (7.1 magnitude) earthquake in a prolonged sequence of thousands of aftershocks.

Key findings include that a specific type of creativity results from the ‘collision’ between individuals and social processes activated by a disaster situation. This type of creativity could be best categorised as ‘little c’ or socially adaptive and emerges through a prosocial filter. There is wide consensus amongst creativity researchers - principally social psychologists - that for output to be considered creative it must be both novel and useful (Runco & Jaegar, 2012). There is greater tolerance for the novelty component after a disaster as novelty itself has greater utility, either as a distraction or because alternatives are few. Existing creativity models show context as input – an additional component of the creative process – but after a disaster the event itself becomes the *catalyst* for social processes that result in the creativity seen. Most participants demonstrated characteristics commonly associated with creativity and could be categorised as either a ‘free thinker’ and/or an ‘opportunist’. Some appear preadapted to create and thrive in unstable circumstances.

Findings from participants’ completion of a Ten Item Personality Inventory (TIPI) showed an apparent reduced need for extraversion in relation to implementing creative ventures in society. This factor, along with higher levels of agreeableness may indicate a potentially detrimental effect on the success of creative ideas established after a disaster, despite earnest intentions.

Three new models are presented to illustrate the key findings of this study. The models imply that disasters enhance both the perceived value of creativity and the desire to act creatively for prosocial ends. The models also indicate that these disaster influenced changes are likely to be temporary.

Keywords: Creativity, Christchurch earthquakes, disasters, post-disaster setting, elite panic

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Chapter 1

Introduction

1.1 Introduction

When the earth moves, who moves with it? In the wake - and in the ongoing face – of thousands of earthquake aftershocks in 2010 and 2011 creative problem solving was widely revered in Christchurch (Bergman, 2014; Wesener, 2015; Cloke & Conradson, 2018). However, in order to better understand how creativity unfolds after a disaster or shock particular questions arise. What role does creativity play after a disaster? Who creates and why? What happens at the intersection between creativity and the social processes resulting from a disaster and the post-disaster setting?

There is a dearth of empirical research directly concerned with creativity in situations of collective adversity. There is also misunderstanding regarding the dominant social processes that follow a disaster. Beyond the event itself, and associated tragedy, post-disaster communities tend to flourish. Fritz (1996) wrote of the positive effect disasters can have on communities. Those sharing in a state of collective adversity are inclined to ignore or overcome social barriers to work together for the common good. Paradoxically, disasters can result in joy. This is contrary to popular belief that mass panic ensues, a view reinforced by Hollywood in films such as *Independence Day* and *Armageddon* in which people are seen to clamber over others to save themselves at all costs (Clarke, 2002). Clarke states that “we have nearly 50 years of evidence on panic, and the conclusion is clear: people rarely panic” and are more likely to help others to safety than cause them harm (2002, p.21). Solnit (2009) concurred and elaborated on much of Fritz’s mid-twentieth century findings and, along with Chess and Clarke (2008), further explored the impact of ‘elite panic’ known to emerge in fearful response to such social activity that could be considered unconventional and threatening to those with established authority. Both Wachtendorf and Kendra (2003, 2004) and Metzl and Morrell (2008) addressed creativity more directly in relation to improvisation and resilience, respectively.

While such sociological and disaster research offers insights into an implied role for creativity in immediate disaster response or survival, there is a lack of research that accounts for the wide range of functions creativity might fulfil in settings such as post-disaster Christchurch. This lack supports the need for closer examination of those who responded creatively to the social processes generated by the disaster. Do they act as they would in a non-disaster setting? Do the social processes and the nature of the post-disaster environment, with its abundance of need, affect their creative practice?

In this study, the accounts of those who acted creatively after the earthquakes - and often during the following prolonged period of aftershocks - form the data analysed and considered in relation to

existing social psychological theory regarding creativity and the composition of a creative individual. Analysis has been completed in order to ascertain if those who acted creatively after the disaster share distinctive characteristics or motivations. Similarly, there was a focus on the way they implemented their creativity in response to their surroundings.

Creativity is a phenomenon of considerable interest to researchers and there is particular interest in discovering what gives rise to creative people and acts of creativity. Since the 1950s psychological research into creativity has gathered momentum (Hennessy & Amabile, 2010). In recent years the field has expanded to incorporate interest in the social psychology of creativity (Barron, 1988; Hennessey, 2003; Simonton, 2000; Amabile & Pillemer, 2012). There is an even more recent focus on how individuals interact with their environment and how physical and social contexts influence creative performance (Hennessey & Amabile, 2010). Corte, Parker & Fine state that “Creativity is not merely a characteristic of individuals, nor is it sponsored by institutions, but it is imbedded in social fields, tied to interaction orders, linked to group cultures and the outcome of social relations” (2019, p.1). In accordance with Corte et al. (2019), it follows that the social response instigated by a disaster such as the Christchurch earthquakes and aftershocks would likely be a distinct reaction to what had occurred, as would the creativity that resulted from individuals interacting with both the disaster setting and those within it.

In such a context, the standard definition of creativity is significant, not just for general understanding, but because the two components widely believed to comprise any output worthy of being called creative may have independent significance. Creativity is often defined as the production of output that is novel and useful (Runco & Jaegar, 2012). Creativity in the context of this study, relates to creative ideas put into practice that were not only original, but also had utility in that they brought benefit to those experiencing the wake of a disaster. Runco & Jaegar’s (2012) standard definition has two parts: one that implies a focus on the creative individual (‘novelty’); the other that implies a role for the social setting (‘usefulness’). Tracking the relationships of these two components within a disaster context could help understand how these two aspects of creativity (the individual and the social) are played out and interact.

Although the disaster setting is what makes this study’s contribution to knowledge valuable, the topic of creativity is relevant in its own right, as are the abilities to create, adapt or innovate. Each are considered especially valuable skills in contemporary society, in which innovation is highly valued (Gesinger, 2016). Yet innovation and creativity are not the same thing. Creativity has been described as the “front end” of innovation (Lenart-Gansiniec, 2019). Innovation is the successful implementation of a creative idea, particularly in an organisational context (Amabile, 1996). With direct reference to this study, creativity implicates the role of the ‘creative individual’ responsible for

novel ideas, while innovation implicates the role of the social context in which novel responses find a 'use'.

To provide some personal context, I chose to undertake this project due to a long held interest in the subject of creativity. My interest in this topic stems from a desire to understand what leads some to take, often, brave steps towards developing ideas that could bring benefit, while others may be deterred. Gaining knowledge about how creativity proceeds after a disaster could lead to understanding what drives and influences those willing to implement novel ideas. The study provides an opportunity to gain insight into how creators who bring benefits to their communities may be better enabled or supported. I have always admired those with creative ability, and in particular those who are willing to risk ridicule, rejection and failure to act on their ideas and beliefs for their own, and the common, good. My interest is also fuelled by the fact that I experienced the Christchurch earthquakes first hand. I witnessed the devastation and dismay in the city and the resilience of the local people. I also adapted my own creativity-based art, textile and furniture restyling business during the period, and experienced a complex and subtle emotional trajectory.

To this point, this chapter has introduced and provided a rationale for the study. It will continue by presenting an overview of the Christchurch earthquakes and aftershocks and aspects of the recovery process. The roles of local and central government will be discussed, including the 'Share an Idea' project designed to maximise community input into the rebuild of the city. Post-earthquake creativity recognised in Christchurch - and what is known regarding its benefits - is outlined before the aim and specific objectives of this research are presented. Finally, a thesis outline that summarises the contents of each chapter will be provided.

1.2 The Christchurch Earthquakes

Christchurch is a city in the South Island of New Zealand with a population of approximately 370,000 people (Christchurch City Council, 2018). Between September 2010 and June 2011 the region was devastated by a major earthquake and prolonged series of aftershocks. It remains difficult to know when, precisely, the post-disaster period began as by March 2016 the wider Christchurch region had experienced nearly 18,000 aftershocks. In excess of 35 had been magnitude 5 or greater (Cubrinovski et al., 2011; EQ Recovery Learning, n.d) (See Figures 1.1, 1.2 and 1.3).

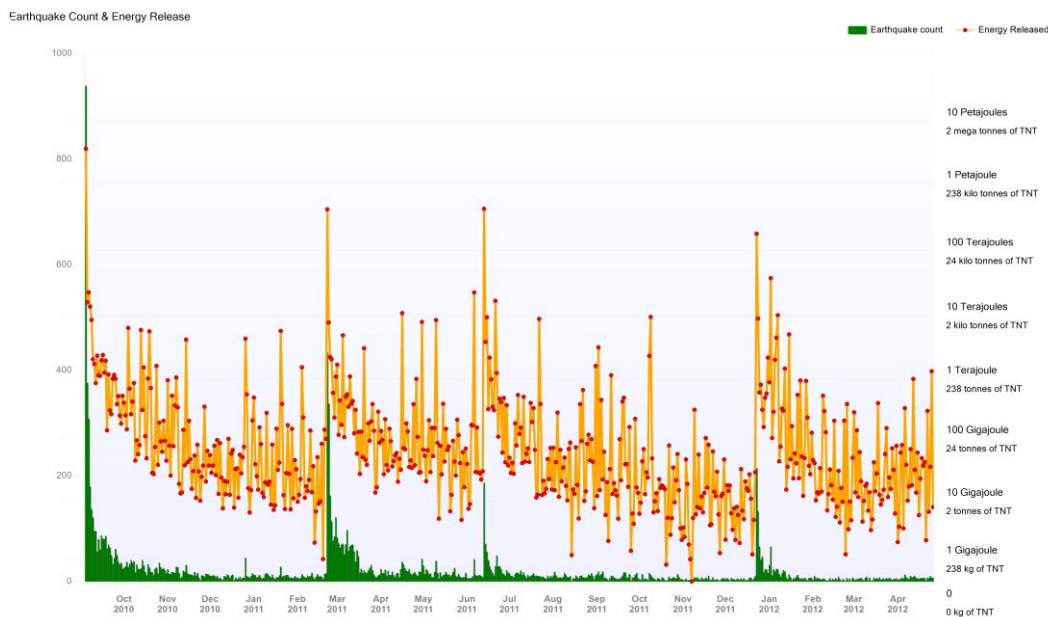


Figure 1.1 21 months of Christchurch earthquakes between September 2010 and April 2012.
Source: (reproduced with permission from Chris Crowe, 2021, <http://quake.crowe.co.nz/>)

The quake also devastated the central city's concrete office buildings. These included two that collapsed: the six-storey Canterbury Television (CTV) building, which killed 115 people; and the five-story Pyne Gould Corporation (PGC) building, that resulted in 18 deaths (Lin II, 2019). In addition to the loss of 185 lives, over six and a half thousand people were injured during, or soon after, the most significant aftershock of February 22, 2011 (Ardagh et al., 2015)¹.

Image removed for copyright compliance.

Figure 1.2 Christchurch, South Island of New Zealand.

¹ The most devastating magnitude 6.3 event to affect Christchurch on 21 February, 2011 is commonly referred to as an earthquake, although is technically considered an aftershock of the 4 September, 2010, magnitude 7.1 earthquake (Potter et al., 2015). However, in this thesis, the 'earthquakes' will be referred to as plural as the post-disaster setting discussed incorporates the physical and social impact of the 7.1 earthquake *and* significant aftershocks that were experienced as earthquakes – particularly the 21 February, 2011 event - combined. A Google Scholar search reveals this is a common choice of terminology (Cubrinovski et al., 2012; Vallance, 2011; Cloke & Conradson, 2018).

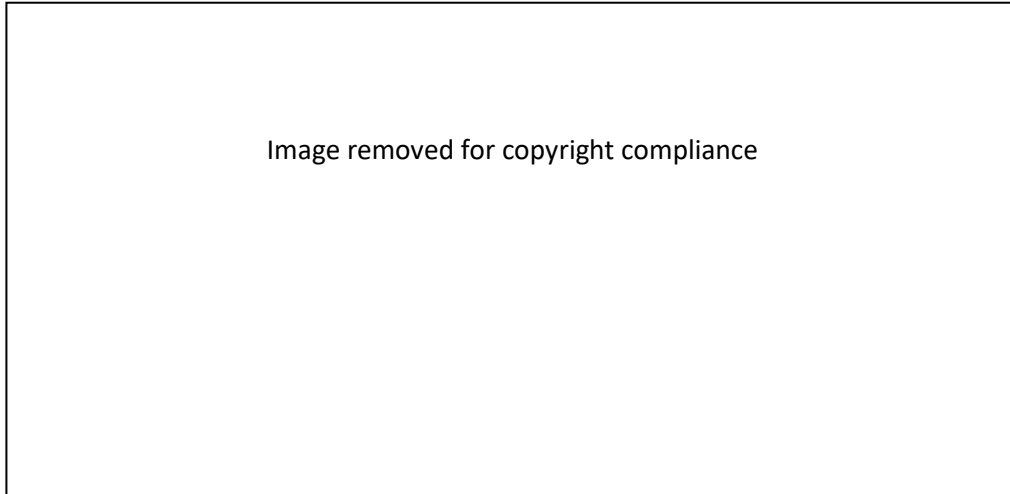


Figure 1.3 an overview of the epicentres of the earthquake and aftershocks during the Canterbury earthquake sequence.

Heritage buildings, housing and infrastructure were destroyed or unusable for a long period. Another major impact was on Christchurch's port, at Lyttelton. "A big blow to Christchurch was that Lyttelton's damaged wharves no longer allowed large cruise ships to dock" (Lin II, 2019, p.1). The stress of living in Christchurch in the period following the major seismic events was significant: "The persistent and uncertain continuation of aftershocks, some large and accompanied by roaring noise and strong jolts provided an environment of uncertainty and continued the experience of re-traumatization for many residents" (Sullivan & Wong, 2011, p. 248). The stress was exacerbated by the Christchurch central business district being so badly affected. More than 1100 commercial buildings in the central business district could not be entered after the February 2011 earthquake. The CBD was cordoned (Fig. 1.4) off which "displaced 50,000 central city jobs" (Chang et al., 2014, p. 513).

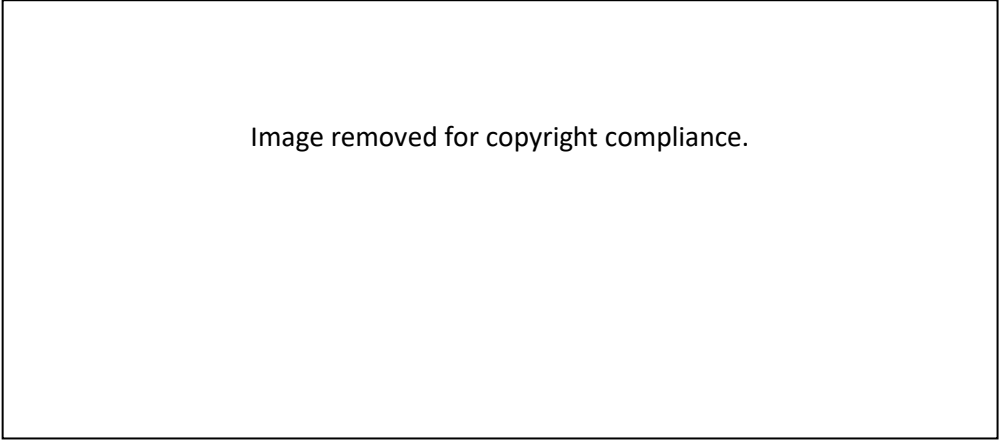


Figure 1.4 The devastated CBD surrounded by a cordon.

Many residents, especially in the eastern suburbs and 'red zoned' areas considered uninhabitable, were experiencing the loss of, or serious damage to, their homes. In addition to ongoing aftershocks, Christchurch residents had to deal with recurring liquefaction² damaged roads and roadblocks, disrupted schooling and employment. Many also had prolonged battles with bureaucracies and insurance companies, while still awaiting reinstatement of basic services. In excess of 750,000 land, building, and contents insurance claims were lodged (Potter, Becker, Johnston & Rossiter, 2015). A whole-of-government report on the Christchurch earthquakes acknowledged that "delays in settlement have been identified as one of the factors that prevented home owners from moving forward with their lives and may have had impacts on their psychosocial wellbeing" (Greater Christchurch Group, 2017, p.11).

Despite these stressful events within this stricken, often unpleasant environment something fortunate seemed to have occurred in the form of individuals incubating unique and clever ideas about how providing goods, services and enjoyment could enhance life in this strange 'new normal' (Cretney, 2016).

1.2.1 Government

The earthquakes affected an area in the jurisdiction of three local governments: Christchurch City Council; Selwyn District Council and Waimakariri District Council. Changes in governance were swiftly made after the first major earthquake in September, 2010. A Minister for Canterbury Earthquake

² "Liquefaction occurs when soil loses strength and stiffness due to earthquake shaking. Loose, sandy soils behave like a liquid as water is forced up to the surface. Liquefaction affected large areas of Christchurch because many suburbs are built on soft soils or sand. Damage from liquefaction may have been worsened by the high water table from a wet winter" (*Effects of the Canterbury Earthquakes*, n.d).

Recovery was assigned and the Canterbury Earthquake Response and Recovery Act 2010 established. This was in addition to the establishment of the Canterbury Earthquake Recovery Commission, with an appointed earthquake commissioner (Greater Christchurch Group, 2017). However, after the most devastating event in February, 2011 a state of emergency was declared and the disaster response was overseen by the Ministry of Civil Defence and Emergency Management before central government established the Canterbury Earthquake Recovery Authority (CERA) to lead the recovery process (Bakema et al., 2019). CERA was expected to collaborate with a wide range of stakeholders within the stricken community. Formal partnerships were established. As stated in the *Whole-of-Government report: Lessons from the Canterbury Earthquakes Sequence*, “The Canterbury Earthquake Recovery Act 2011 provided that the Recovery Strategy must be developed in consultation with Christchurch City Council, Environment Canterbury, Waimakariri District Council, Selwyn District Council, and Te Rūnanga o Ngāi Tahu ” (Greater Christchurch Group, 2017, p.7). Many tensions arose from CERA’s involvement with these partners and the wider community (Truebridge & Redmond, 2017). The report mentioned, provides a comprehensive overview of the sources of tension. However, many Christchurch residents believed that CERA had too much power and did not engage enough with stakeholders and community members. People began to feel disempowered and frustrated (Bakema et al., 2019).

With this in mind, frustration seems likely exacerbated by CERA’s failure to adequately reflect community input in the recovery plan, despite it being fully and readily accessible following the Christchurch City Council lead ‘Share an Idea’ campaign (Fig.1.5). Members of the public were invited to participate in several large scale events to provide ideas and make requests for what they would like to see in their rebuilt city. Mayor Bob Parker had encouraged the community to be bold, visionary and take advantage of the opportunity to be adventurous. The largest event, a community expo, attracted in excess of 10,000 people and garnered more than 100, 000 ideas, which were analysed by a Danish architect tasked with advising the City Council team translating the ideas into a plan for the central city (Swaffield, 2013). In response to dismay regarding how little public input was recognisable in the final plans, the government eventually claimed that more specific information was needed to implement a plan in response to dismay regarding how little public input was recognisable in the final plans (Greater Christchurch Group, 2017). There was anger at the state, principally CERA, for not consulting enough with the general public, instead preferring to interact only with those in positions of authority (Bakema et al., 2019).



Figure 1.5 Share an Idea. Members of the public were invited to provide input into the rebuild plan.

Despite local government organisations, primarily the CCC, having some power as a strategic partner during the recovery period, overall authority lay with the central government entity.

1.2.2 Post-disaster Creativity

Neither the words 'creativity' nor 'creative' feature in the government report prepared to determine lessons learned from the aftermath of the earthquake (Greater Christchurch Group, 2017). This is despite the fact for several years after the disaster "hundreds" of projects were established to support the affected community. The projects provided "public amenity through the provision of venues, galleries, urban farms, gardens, restaurants, dance floors, games and memorials" (Bennett, 2019, p.1). (e.g., see Fig 1.6).

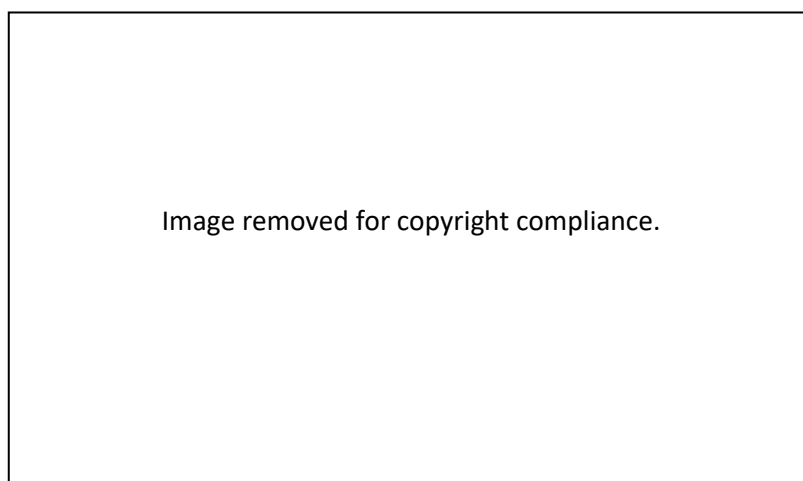


Figure 1.6 Dance-O-Mat a unique outdoor entertainment option. One of the creative ventures established on vacant land in Christchurch after the earthquakes.

The lack of mention of creativity may reflect the lack of importance attached to the expressions of creativity by some of those in authority or, more cynically, that the projects were able to “challenge aspects of the government’s leadership, and raise concerns about long-term problems for the city” (Bennett, 2019, p.1) and so were ignored. There was public frustration with aspects of the government-led recovery, at a time when much of the prominent creativity emerged. As Bakema et al. (2019) stated, many of the flourishing activities, particularly those referred to as ‘grass roots’ or ‘transitional’ projects were triggered by a need to be more engaged in the recovery and redevelopment of the city. Therefore, the government report does not correctly gauge the value of creative contributions during Christchurch’s post-disaster period. Creativity was identified as important in the post-disaster setting. Grass roots groups and collectives - for instance Gap Filler and Greening the Rubble - whose creations served to enliven the central city, were celebrated both locally and internationally (Fig. 1.7) (Bergman, 2014). Christchurch post-disaster creativity also inspired a feature length film, *The Art of Recovery*, which premiered at the 2015 Christchurch Film Festival.

The Art of Recovery sets out to document "one of the most dynamic, creative and contentious times in the history of Christchurch". Director Peter Young (*The Last Ocean*) examines a post-quake city where creativity thrives among the rubble: from street art to dance spaces, to the beloved 185 Empty Chairs Memorial. (NZONSCREEN, 2020)

Some found they could use their artistic skills to benefit the wider community and themselves by teaching and sharing artistic knowledge. This benefitted both artist and student. Maidment et al. (2015), whose research focused on the importance and benefits of craft-making in the Christchurch setting found, for example, that “people in the wake of disaster have the capacity to construct their own knowledge and configure their own practices to maximise their recovery in unique and creative ways” (p.151).

After Earthquakes, a Creative Rebirth in Christchurch




Image removed for copyright compliance.

Scenes from Christchurch clockwise from top left: Coffee sits on a table from Rekindle; Sam Crofskey, owner of C1 Espresso; a hole on a miniature golf course set up in spots across the city; the Cardboard Cathedral.

Figure 1.7 Post-disaster creativity in Christchurch featured in a *New York Times* article in 2014.

The disaster response to create could be seen in the work of crafting communities around the city after the February 2011 earthquake. Groups became involved in joint ventures such as the creation of quilts for the surviving Japanese language students rescued from the collapsed CTV building, hand-making fabric hearts (Fig. 1.9) for public distribution and some even crocheted enough squares to cover a roadside shipping container installed as a rock fall protector (Maidement et al., 2015).

Creativity is known to be therapeutic.

Metzl (2009) found links between creativity and resilience in New Orleans after Hurricane Katrina, as did Bender, Metzl, Selman, Gloger & Moreno (2015) in the wake of Talca, Chile's 2010 earthquake. Both studies found that using available resources creatively and art production led to survivors feeling empowered (Bender et al., 2015).



Figure 1.8 Creating in response: handcrafted hearts placed around the city after the tragic event of February, 2011.

The increased prevalence of street art was received favourably. Christchurch was listed alongside New York and Berlin in *Lonely Planet* as the home of significant street artwork (Gates, 2017). In the past, spontaneous murals and other artworks on public walls tended to be considered graffiti, a form of vandalism. The street art revealed the talent and skill of the street artists, who took advantage of the earthquake-prompted opportunities to use bare walls (Fig 1.9). The availability of blank walls to be brightened and building owners full of post-disaster goodwill provided the conditions for this now more widely valued creative medium to flourish (Macfie, 2014).

While the opportunities to create are important, so, too, is what becomes of the creativity. Both the implementation of creative ideas in the disaster setting, and what happened to those creative ideas as recovery proceeded, are of interest in this study. Assuming this dual focus allows an opportunity to understand how disasters may alter the way creative activity – or behaviour - intersects with wider social, political and economic environments during the adjustment period that follows the shock of an event like the Christchurch earthquake sequence. Many people have creative ideas. Just as many help support the development of ideas. However, the implementation is the bridge between these two stages. Good novel ideas are not always implemented, and therefore potential benefits go unrealised. To gain an understanding of who is prepared to implement a creative idea in an adverse setting, characteristics, influences and motivations must be identified. With this understanding, along with that pertaining to how those who implemented creative ideas responded to the social, political and economic processes that followed a disaster, new knowledge can be gained. Considering what is revealed will help determine if the personal qualities identified in post-disaster creators affect their responses to social process, or their creative practice.



Figure 1.9 Street artists took advantage of bare walls to beautify the city. Source: Cameron, 2016

1.3 Research Aim and Objectives

The overall aim of this research is to generate an understanding of how creative ideas implemented after a disaster proceed in that context.

The study has two objectives:

1. Identify and discuss the characteristics, influences and motivations of those who acted creatively in post-earthquake Christchurch.
2. Critically evaluate and provide a systematic account of the ways in which creative activity occurred in response to a situation of collective adversity.

1.4 Thesis Outline

Chapter 2 provides an overview of past research from the fields of creativity, social psychology, disaster, sociology and entrepreneurship. The definition of creativity is considered and relevant theoretical models are presented. How communities affected by disaster are known to respond and behave, often creatively, is then discussed as are the characteristics believed to contribute to a creative personality. Literature concerning how family or educational experiences may influence creativity is explored. What is understood about the support or hindrance of creativity in the context of a post-disaster setting is also discussed.

Chapter 3 discusses the methodology and specific methods followed in this study. A full discussion of research methods and ethical considerations are provided.

Chapter 4 is the first of three chapters that present the study's results. Specifically, this chapter provides results that address the first research objective regarding the characteristics of the participants. The results of the Ten Item Personality Inventory (TIPI) are presented and points of significance highlighted.

Chapter 5 is the second results chapter and presents data concerning key influences on those who implemented creative ideas and on their motivations. As with Chapter Four, significant findings revealed through the coding process are discussed. Data that indicate who and what participants indicated to have been influential or motivating are presented. Findings in relation to family and educational influences are provided. The data, and their analysis, referred to in this chapter predominantly focus on pre-earthquake experiences and personal development.

Chapter 6 presents the third, and final, set of results. The data primarily address research objective two. This chapter highlights key findings about what participants believe enabled or created obstacles for them during the process of implementing or trying to sustain a creative idea in the post-earthquakes setting. Enablers and obstacles are categorised thematically. Enablers discussed include material assets, support networks, local government, available opportunities, relaxation of rules, the spirit of recovery and an 'attitudinal shift'. Obstacles include those related to the region's return to 'normal', a form of 'elite panic' and general fatigue.

Chapter 7 provides an overall discussion, which considers the significance of the study's findings, including that the existence of a specific form of post-disaster creativity has been established. The potential importance of the roles of extraversion and agreeableness are expanded on, as is the observation that many of the study's participants can be categorised as either 'Free Thinkers' or 'Opportunists', or occasionally both. Individuals who belong to one or other of these groups are preadapted to acting creatively in an adverse setting. There is focus on creativity itself and what the

data reveal about creative novelty becoming more highly valued, for a time, after a disaster. A model is presented to illustrate this occurrence. The significance of the various enablers and obstacles highlighted in Chapter 6 are expanded on, but most usefully presented in two models. One shows how a post-disaster power vacuum allows creativity to proliferate after a disaster, while the other combines all key findings to provide a detailed comparison of how creativity proceeds in both non-disaster and post-disaster settings.

Chapter 8 is the concluding chapter. Research objectives are addressed by bringing together the key themes that have been illuminated and elaborated on in the previous discussion. The unique theoretical contributions of this research, the timeliness and relevance of the study, limitations and suggestions for future research are also presented.

Chapter 2

Literature Review

2.1 Introduction

This chapter reviews relevant research from the creativity, social psychology, disaster, sociology and entrepreneurship literature. The findings from previous research are reviewed to determine what is currently understood about creative idea implementation in adverse settings in addition to what is known about the characteristics of and influences upon creative individuals. To begin, creativity is discussed with a focus on its typically dichotomous definition. Types of creativity are outlined, as are theoretical models that depict the role of context in the creative process. This is followed by discussion of what is known about creativity in association with community response to disaster. Common beliefs, increased opportunities, destabilised authority and ‘elite panic’ are all reviewed. The chapter continues by overviewing what researchers have found in relation to the characteristics of creative people. Whether or not a definitive creative personality exists, as considered in the literature, is considered along with characteristics that are commonly associated with creative individuals. Key findings from research about how family or educational experiences may impact on creativity are discussed before what is known about contextual support for, or hindrance of, creativity is reviewed.

2.2 Creativity

As creativity is central to this study, an overview of how researchers have attempted to define and explain the concept follows.

The precise definition of creativity has been the subject of much debate, the nuances of which are beyond the scope of this thesis. However, a dichotomous definition has dominated discussions of creativity. Whether through the pairing of terms such as ‘novel’ and ‘valuable’, ‘useful’ or ‘appropriate’ (Hennessey & Amabile, 2010), or ‘original’ and ‘effective’ (Runco & Jaeger, 2012), creativity researchers have expressed what is a near consensus with regards to a “standard definition of creativity” (Runco & Jaeger, 2012, p 92). Some version of this definition is almost unanimously used by those who research creativity, including Sternberg and Lubart (1996), Oldham and Baer (2012), Shalley, Zhou and Oldham (2004) and Amabile and Pratt (2016). Both components are usually considered necessary if something is to be considered a creative product. Novelty alone is said to be insufficient (Feist, 1998). To emphasise this point, Runco and Jaeger (2012, p.92), noted that “Originality can be found in the word salad of a psychotic”. Unless the idea, artefact or problem

solution is beneficial to an individual or community most of those who theorise about creativity would not consider it a creative product (Amabile & Pillemer, 2012).

Some authors, like Csikszentmihalyi (1996), are strong advocates for the importance of creative output being judged as socially valuable. “Creativity is not the product of single individuals, but of social systems making judgements about individuals’ products” (1999, p. 314). Glaveanu (2011) concurred, saying “Originality, freshness of perceptions, divergent-thinking ability are all well and good in their own right, as desirable personal traits. But without some form of public recognition they do not constitute creativity” (2011 p.7). However, “originality is the only component of creativity with which most scholars concur” (Acar, Burnett & Cabra, 2017, p.141). Some have noted that something must demonstrate social usefulness before it is accepted as creative. Diedrich, Benedek, Jauk, and Neubauer (2015) stated “the evaluation of creativity has often been seen as an elusive question as it may depend on the eye of the beholder” (p.35). It is difficult to assess usefulness or value. Like novelty, this quality tends to be subjective and vary according to era or cultural context (Weisberg, 2015). This variation may not be surprising. Some like Glaveanu (2011, p.11) have viewed this positively, seeing “cultural lenses” as “useful mental shortcuts” to deciding what is creative. However, should it be the ‘last word’ on which output has creative merit? Batey and Furnham (2008) attempted to find a middle ground. They suggested that there may be a need for domain specific definitions. They stated that “a requirement of novelty may be inappropriate for some scientific endeavours, a requirement of usefulness may not prove a fitting criterion for the arts” (2008, p.360).

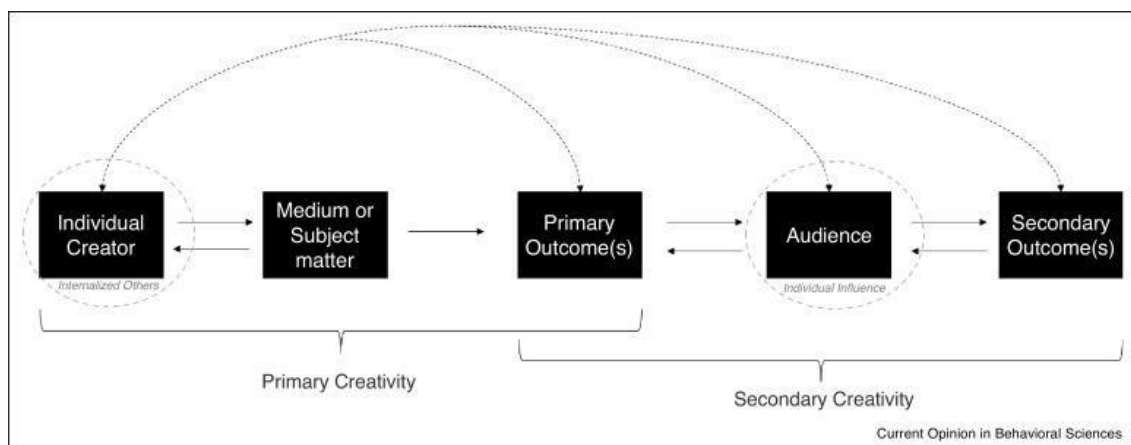


Figure 2.1 Primary and Secondary Creativity (PSC) (Runco & Beghetto, 2019)

Arguably, the most satisfactory way of addressing the problem is to be found in Runco and Beghetto’s (2019) Primary and Secondary Creativity (PSC) model (Fig.2.1). They explain that the model “illustrates how the one process of creativity can explain both personal and social judgments of creativity” (p.1). Creativity is viewed as initially personal:

Although still recognizing external social factors, personal accounts focus more on cognitive mechanisms and more subjective, individual accounts of creative processes and outcomes. This includes the claim that something need only be original and effective for the individual creator to be considered creative. (p.7)

An individual creator may have some influence on the social reception of their output, however secondary creativity is considered “external to the individual” (Runco & Beghetto, 2019, p.8). An audience can interpret meaning and assign value, but judgement regarding creative merit, at least initially, exists independently of a social response. The PSC model supports this study’s dual focus on both the individual and the context in a post-disaster setting.

There are different types of creativity, which reflect the scale or impact of creative acts. Beghetto and Kaufman (2007, 2009) referred to Big-C creativity “which consists of clear-cut, eminent creative contributions”. Classical composers and Pulitzer Prize winners, whose work has had lasting impact, are examples of Big-C creators (2009, p. 2). Little-c creativity, by contrast, is described as ‘everyday’ creativity. “Little-c creativity refers to everyday creativity people engage in for fun in their leisure time (e.g., creating original presents, knitting a scarf, or jamming with friends)” (Diedrich, Silvia, Gredlein, Neubauer, & Benedek, 2018, p.1).

Relatedly, there have been a number of models developed to help understand the creative process. These models include Csikszentmihalyi’s (1999) Systems Model of Creativity (Fig 2.2) and the Componential Model of Creativity (Amabile, 1983,1996) (Fig 2.3). While both models place high value on the contribution of context - i.e. the physical or social environment. Csikszentmihalyi’s (1999) model (Fig. 2.2) illustrates that a domain with “a set of rules and practices that apply to content sharing similar characteristics” is an important element in an interactive network that also includes the individual and the ‘field’ (Csikszentmihalyi, 2014, p.538). Shared understanding about the wider domain (cultural norms) influence an individual who produces novelty. However, Csikszentmihalyi’s model suggests any novelty produced becomes creative only with the approval of the ‘gatekeepers’ of a particular field, perhaps architecture or figure skating, for instance. Acceptance into a field is only likely *if* the creative output ‘fits’ within the existing domain. The Systems model shows context as an important component of the creative process. The domain – or particular environment - is comprised of, and influenced by, cultural and social norms which impact on the fields within it. Individual creators are affected by their personal background and experiences within the domain as well as being subjected to, and affected by, the norms of the field. The model shows that each of these contexts can impact on the creative process, while the field, domain and individual can also influence one another.

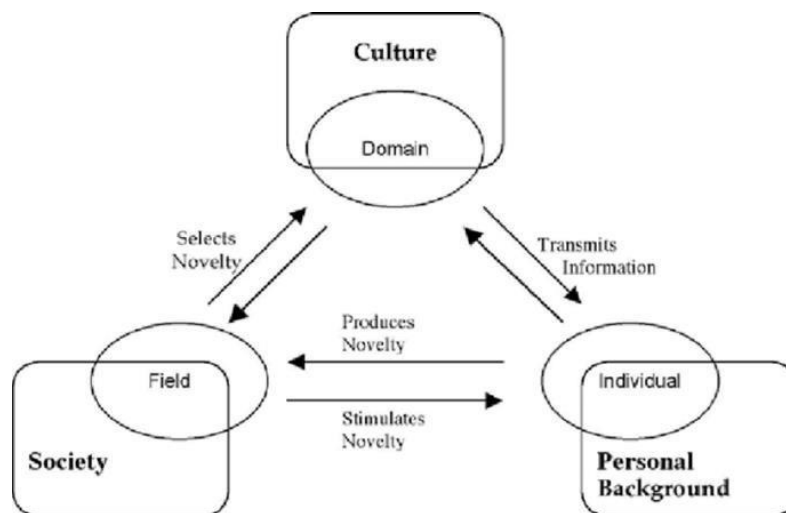


Figure 2.2 Systems Model of Creativity. Source: Csikszentmihalyi, 1999

Amabile's model (Fig. 2.3), on the other hand, depicts three components interacting within a single environment. Amabile conceptualises creativity as a process that involves components of domain-relevant skills (expertise), creative thinking skills and task motivations. In the Systems model the 'domain' refers to the wider environment and the 'field' to a specific area of expertise within the 'domain'. However, in the Componential model 'domain' represents expertise relating to a particular skillset combined with knowledge and comprehension of the 'rules' of the environment in which those skills are activated. This model was an early attempt to emphasise "the previously neglected social factors and highlights the contributions that a social psychology of creativity can make to a comprehensive view of creative performance" (Amabile, 1983, p.357).

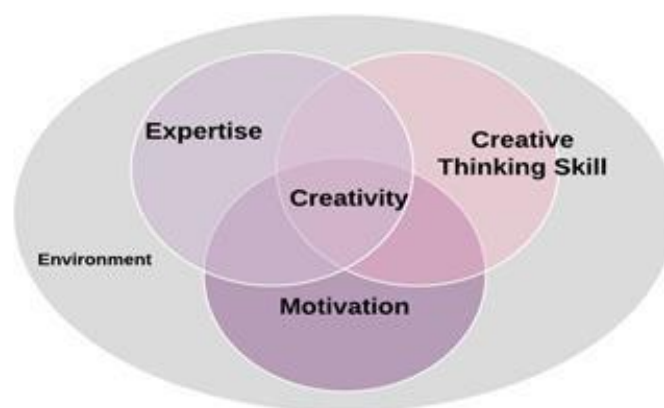


Figure 2.3 Componential Model of Creativity. Source: Amabile, 1996

Furnham, Batey, Anand & Manfield (2007) added to this developing understanding. They explained that the way components and the environment interact in the various domains is complex. They concurred it would be misleading to examine cognitive skills or traits in isolation.

Motivation is a key component of the Componential Model of Creativity. It is necessary for the activation of an idea to occur and is involved in determining whether the process can be sustained (Hennessy & Amabile, 2010, p.259). Amabile and Pratt (2016) reassessed and consequently adapted Amabile's earlier model. They created the Dynamic Componential Model (Fig.2.4).

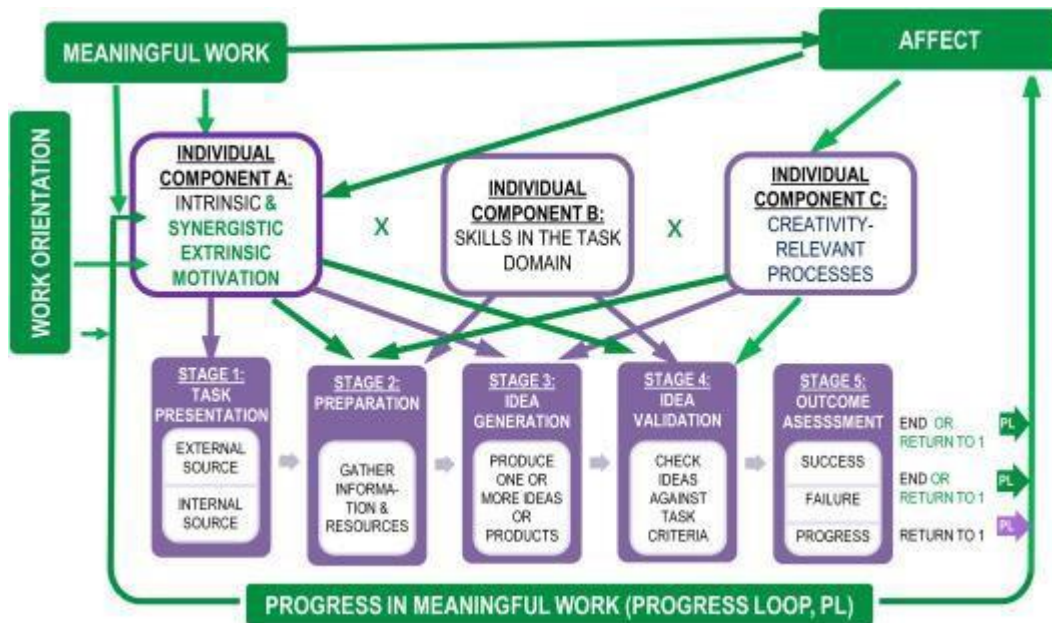


Figure 2.4 The Dynamic Componential Model of Creativity. Source: Amabile & Pratt, 2016

Amabile is an organisational researcher, so the model is designed to explain the creative process within organisations, where innovation resulting in productivity, not creativity, is the ultimate goal. The later adaptation of the model allows the role of extrinsic motivation in the creative process to be acknowledged. Extrinsic motivation is understood to be affective (i.e., concerning emotions) when it is inspired by or results in the prospect of meaningful work (Amabile & Pratt, 2016). The influence of Grant and Berry's (2011) research, that identified prosocial motivation as being important to the creative process, is also reflected in the adapted model by the concept of meaningful work. Work considered prosocial is also likely considered meaningful. While what constitutes meaningful work can be subjective, and is not always enjoyable, it is widely viewed as "positive" or "significant", characteristics commonly associated with prosocial behaviour (Amabile & Pratt, 2016, p.170).

All versions of The Componential Model of Creativity owe much to Ryan & Deci's (2000) Self Determination Theory (SDT) (Fig.2.5) which identifies factors that contribute to intrinsic motivation, an essential component of the model. Ryan & Deci believed that in order to maximise human potential "intrinsically motivated behaviors, which are performed out of interest and satisfy the innate psychological needs for competence and autonomy are the prototype of self-determined behaviour" (Ryan & Deci, 2000, p.65). In SDT, experiences of autonomy, relatedness and competence

tend to generate volition, engagement and motivation which then lead to performance and creativity.

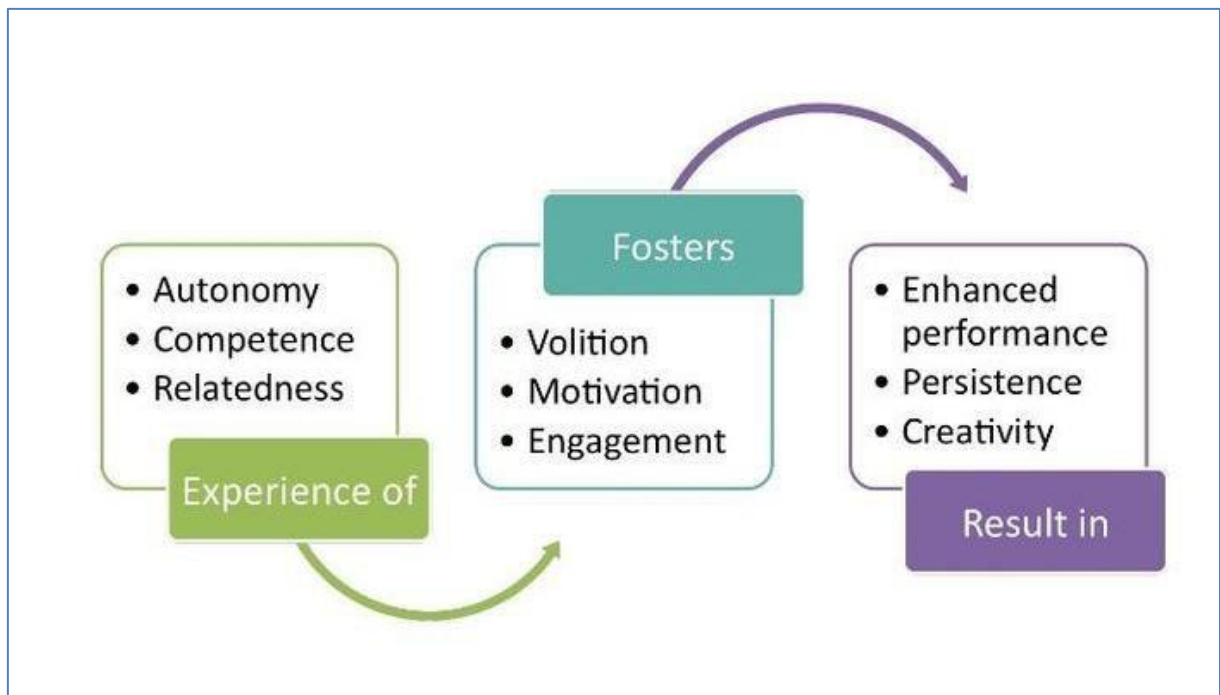


Figure 2.5 Self-determination theory (SDT) (Ryan & Deci, 2000)

While creativity remains a complex, difficult to define concept that takes various forms and fulfils a range of roles, some consensus has been reached. As discussed, a creative idea or product must involve novelty, and be considered useful (Runco & Jaegar, 2012). To determine the requisite creative value of the ideas implemented by participants of this study, the creative output of each, within the setting, was categorised by Kaufmann's (2003) taxonomy (Appendix A). This process determined that each participant's efforts could be considered creative. The assessed creative output ranged from novel adaptations to a familiar solution to highly novel tasks used to address highly unique problems. Therefore, all examples of participant creativity contained both novelty and utility, at least to a degree.

Creative ideas cannot proceed in a vacuum. Context is acknowledged in the three models discussed, yet extreme or non-routine settings have not been considered. Reviewing these models against the findings of this study within a post-disaster context could transform our understanding of how the 'personal' and 'social' aspects of creativity together constitute what has come to be known as creative activity. Next, literature that has identified characteristics commonly associated with post-disaster communities is discussed.

2.3 Community response to disasters

Disasters have been depicted, fictionally and otherwise, as resulting in immediate panic and mayhem. However, disaster research pioneers, Fritz (1996) and Quarantelli (1985), recognised the unexpected benefits brought about by a post-disaster community spirit that tends to result in opportunities for affected communities. An increase in community spirit and consequently prosocial behaviour is a well-known phenomenon after a disaster (Fritz, 1996; Rodriguez, Trainor & Quarantelli, 2006; Thornley, Ball, Signal, Lawson-Te Aho, & Rawson, 2013; Quarantelli, 1996 and Tierney, Bevc, & Kuligowski, 2006). Rodriguez et al. (2006) identified prosocial and non-traditional behaviour as notable responses in New Orleans after Hurricane Katrina, arguing such behaviours amounted to a primary response, rather than the anti-social behaviour widely reported in the media.

Disasters can provide the opportunity to view a previous, more routine existence as dull and ordinary, unfulfilling and conformist (Fritz, 1996). Fritz's research led to discoveries such as individuals' belief that disasters help them become better versions of themselves. A disaster provides those affected with clear and immediate purpose. They can be effective and share experiences with others with whom they suddenly have much in common (1996). Bastion, Jetten, Thai and Steffens (2018) also found that "sharing aversive experiences of pain can enhance supportive team interaction and that this in turn promotes creativity" (p.6). The unexpected positive aspects of a post-disaster setting are the overriding theme of Rebecca Solnit's *A Paradise Built in Hell* (2009). Through comprehensive analysis of some of the most significant disasters of modern times, Solnit found that disasters can be the best and worst of times. She talks about the phenomenon of "post-traumatic-growth" (PTG) when the "devastation of loss provides an opportunity to build a new, superior life structure almost from scratch" and "people valued the sense of urgency, solidarity and depth, a shift away from an everyday diet of trivia to major questions about life, death, politics and meaning" (2009, p.222). Similarly, Harms, Abotomey, Rose, Woodward Kron, Bolt, Waycott and Alexander (2018) wrote of creativity being a contributor to PTG for those involved in the 'Black Friday' bushfires in Australia in 2009. They found the survivors appreciated the opportunity to think creatively and to produce beauty as an expression of something terrible. Fritz (1996) and Solnit (2009) found disasters provided those affected with the impetus to engage more fully in a new shared existence with others. Harms et al.'s (2018) research echoes this. They state that "expressions of creativity were not typically solitary acts" (Harms et al., 2018, p.425). Although both Fritz (1996) and Solnit (2009) found that this experience did not endure, that a post-disaster setting provides plenty of opportunity for positive-mood invoking creative idea implementation does not appear to be in dispute.

Creativity has also been identified in the literature in relation to the Christchurch earthquakes. Barber's (2013) doctoral dissertation questioned "whether regulation and creativity can only ever be mutually exclusive in a placemaking context" (p.7). Cloke et al. (2017) wrote about the collective creativity seen in post-earthquakes Christchurch, as did Wesener (2015) with a particular focus on the transitional community's enhancement of open urban spaces. Hayward (2013) mentions creativity, in addition to political imagination and courage, as a necessary component of the resilience required to meet the challenges presented by the circumstances. Popular creative activities and projects, generated by prominent transitional collectives were widely reported on. Bennett (2019) states, "over 80 essays and texts" have been written about, particularly, the temporary transitional projects that appeared in Christchurch after the disaster, many of which presented as highly creative. However, although these projects were highly visible, this study uses a wider lens. While this research includes the accounts of participants involved in prosocial or creatively adaptive transitional projects, it equally considers independent or relatively isolated creative idea implementers from a broad range of domains. Accordingly, the data were read against a wide range of creativity and disaster literature.

2.4 Post-disaster creative idea implementation

Past research indicates that an increase in opportunities to implement creative ideas occurs after a disaster. The ability to do so is also enhanced by a post-event sense of freedom as those in authority initially appear unsure about how to proceed.

2.4.1 Opportunities created by disaster

Disasters involve destruction. The research indicates that destruction results in the need to create, or at least recreate or adapt. The aftermath delivers opportunities. The actual disaster, according to Gilbert (1998), has only "ephemeral significance" and is a "trigger" (p.21). Disasters bring challenges that "can trigger entrepreneurial intentions to turn inconveniences and coincidences into opportunities, putting into practice a person's professional strengths and tacit capabilities" (Monllor & Murphy, 2017, p.620).

Berno (2017) identified that opportunities for social entrepreneurs to address need, particularly for food security, through public and private collaboration were prevalent after the Christchurch earthquakes. Storr et al. (2016) found that entrepreneurs, more generally, helped create a sense of stability in New Orleans after Hurricane Katrina through their ability to meet needs to alleviate suffering. However, Klein (2007) recognised that disasters indeed bring opportunities, but also argued that their exploitation by those with economic and business agendas can result in further or prolonged instability and suffering. Amongst others, Klein overviewed events that followed the

Falklands and Iraq wars, and Hurricane Katrina, to highlight the negative impacts on the, often, marginalised citizens of areas affected by, first, disaster then post-disaster exploitation.

Monllor and Altay (2016) have observed an inverted creative destruction taking place in response to the unexpected opportunities that arise. According to Schumpeter's (1934) theory of creative destruction, capitalist activity prospers because entrepreneurs destroy established structures by innovating, causing change and difference. In the case of a natural disaster 'Nature' is the destroyer. Other researchers have monitored the recovery of New Orleans after Hurricane Katrina, including Storr, Haeffele-Balch, and Grube (2016) & Chamlee-Wright and Storr (2010). They have provided comprehensive accounts and analysis of idea implementation in that region after disaster, particularly in relation to entrepreneurship. Storr et al. (2016) summarised the value of post-disaster entrepreneurs as individuals who indicate to displaced residents that a community is likely to rebound. Cretney (2016) noted that disasters provide space for creative activity to occur. Therefore, the literature establishes that disasters lead to opportunities, but views vary regarding a clear link between opportunity and stability. There is greater agreement that instability follows disaster for established power structures and systems. Destabilised authority can be both advantageous and unsettling.

2.4.2 Destabilised authority

Another factor that could affect novel idea implementation after disaster is that those in governing organisations can be caught by surprise and therefore be ill-prepared to cope with the problems encountered in the initial post-disaster period. Gardner (2013) explained: "Individuals in key organizational and support positions may be too busy, distracted, overwhelmed, or understaffed to carry out the responsibilities of their prescribed organizational role...established norms and protocol must be re-evaluated, negotiated, suspended, or altogether abandoned..." (p.237). Therefore, business, industry and political institutions experience instability in an unprecedented and unpredictable post-disaster environment. Rules that allow order to be maintained in routine settings are likely no longer to apply. In addition, the disturbance leads to a reduction in the ability – and perhaps inclination - to closely monitor adherence to regulations. Fligstein (1997) stated that: "when the organizational field has no structure, the possibilities for strategic action are greatest" (p.401). Therefore, it seems organisational instability in the post-disaster period encourages and enables creative responses. Dickinson (2018), with reference to the Christchurch earthquakes, stated that "disasters generate distinctive spaces which reveal and provoke potentially disruptive imaginations and actions" (p.621). Dickinson argued that "the ruptures afforded by the earthquakes opened up the possibility for the dominant practices of a complex political conservatism in Christchurch to be challenged" (2018, p.621).

Bruck et al. (2001) suggested the disaster setting can allow entrepreneurs to feel less constricted and faced with a wealth of opportunities. They claimed “extreme events can encourage new businesses” as habitual behaviour is disrupted, traditional institutions are weakened which may lead to a “change in the balance of power in favour of smaller, more flexible, organizations” (p.581). This situation can result in a power vacuum, available to those willing and able to act to provide what organisations and institutions are expected to deliver in non-disaster times.

A relatively dated but useful study by Lanzara (1983) identified the types of ventures that provide much needed goods and services after a disaster. This research focused on ephemeral organisations, or short-term ventures created in response to – or to respond to – large scale disasters. Like Fritz (1996) and Rodriguez et al. (2006), Lanzara dispelled the “commonplace imagery of disasters” often imagined as “scenes of blight and disruption, of death and sorrow, of panic, chaos and despair” (p.71). While Lanzara admitted that “disaster can never be made to look beautiful” he found that “a large scale disaster, such as an earthquake, can be an opportunity for organizational learning and social innovation” (p.71). Lanzara’s (1983) research was based on field observations following a major earthquake in Southern Italy. He was interested in how these short-term ventures developed and what led to them disbanding and disappearing after a short period of time. Regardless of their ephemeral nature, Lanzara found that these organisations, “despite their fragility and impermanence... play an important role during the post-impact emergency” (1983, p.72). Often these roles involved satisfying the need for commonplace comforts, like coffee. Lanzara (1983) identified a coffee seller who established an ephemeral business as creative.

“The emergence and the intervention of the coffeemaker should not simply be seen as a gap-filling adaptation, but as a creative act of organizational design. The actor actively produced a model of his own intervention” (1983, p.76). Such ventures also serve as meeting places and can play an important social role. Even for a short period, the social interactions can offer comfort after an extreme event, and provide a “sense of normality, having something to do, somewhere to go and people to talk to” (Marquet, 2015, p.61).

Kendra and Wachtendorf (2003) also expressed these views in relation to events after the 9/11 terrorist attacks in New York in 2001, as did Wachtendorf, Kendra and De Young (2018). Stallings and Quarantelli (1985) and Twigg and Mosel (2017) have also written of the necessity of innovative emergent groups, short-lived or otherwise, particularly in the initial post-disaster phase. This literature shows that ventures that emerge after a disaster can be beneficial to communities. Weakened governing organisation allow for ephemeral and emergent ventures to arise and effectively deliver, when governing organisations cannot, particularly in the early stages of recovery.

However, aspects of the pre-disaster status quo are eventually restored and, in response to the unconventional valued in the immediate aftermath of disaster, a form of panic can ensue.

2.4.3 Elite Panic

As they have much to lose, those in authority can fear change (Kalandtaridis & Fletcher, 2012; Di Maggio, 1988). The response to this fear is known as 'elite panic', a term coined by Clarke and Chess (2008) to describe what was seen following Hurricane Katrina when those in authority feared "human beings at large" that "are bestial and dangerous" and must be acted against "with savagery to ensure individual safety or the safety of his or her interests" (Solnit, 2009, p.309). Other researchers, including Clarke and Chess (2008) and Tierney (2008) considered this panic responsible for extreme actions taken against groups and individuals in the aftermath of Hurricane Katrina. The 'top' become reluctant to accept wisdom from the public on the 'ground', ultimately thwarting alternative ideas that may have provided disaster relief and necessary substitutions for lost goods and services. As Clarke told Solnit "they don't have a way to fold civil society into their official conceptions" (2009, p.209).

In summary, the creativity literature reveals that existing models demonstrate the importance of context in the creative process and that for anything to be considered creative it must possess both novelty and utility. In addition, disaster researchers have found that communities tend to respond positively after disasters. They suggest this is likely due to a sense of shared experience and purpose. Affected individuals are thought to feel highly effective which is life-affirming, at least for a time. Post-disaster settings are said to offer opportunities for those willing to implement ideas in a power vacuum that tends to appear. Many of the ventures established after a disaster can be ultimately ephemeral, but do bring benefits during a time of immediate need. Eventually, officialdom re-establishes and can act against unique or unsanctioned ideas and operators that can be perceived as a threat. Tension is exacerbated when structural and institutional processes appear unsupportive of creative ideas perceived as interfering with the re-establishment of a pre-disaster status quo.

2.5 Characteristics

Understanding what is meant by creativity and what tends to occur within disaster affected communities is valuable for approaching this study. However, so, too, is an awareness of characteristics researchers have found common to those who act creatively. There has been little research on the personal characteristics of those involved in creative acts after a disaster. In fact, research that provides specific knowledge about those who create after a disaster was not found prior to commencing this research. Therefore, by proxy, findings regarding the behaviour and characteristics of individuals in non-disaster settings is used to compare with what was revealed in

this study's data. Currently available research appears to reinforce that a precise combination of traits and characteristics that form a definitive creative personality has not been identified.

2.5.1 The creative personality

Helson (1999) claimed that research on the creative personality was "still beset with contradictions and anomalies" (p.371) and Martinsen (2011) stated that "a succinct and comprehensive measure of the facets and domains of the creative personality does not seem to exist..." (p.186). However, research has revealed some recognised personality characteristics and traits that commonly present in those who demonstrate creative ability. According to Sternberg (1988), creative people are progressive thinkers who experience dissatisfaction with the way things are. This dissatisfaction can result in constructively exploring new approaches, instead of merely dismissing conventional ones. Sternberg suggested that a creative individual is "a person who enjoys looking for new things to do and new ways of doing old things" (p.142). Feist's original meta-analysis (1998), and updated works (1999, 2010), provide a comprehensive analysis of the characteristics and traits of creative people. Feist stated that "in general creative people are more open to new experiences, less conventional and less conscientious, more self-confident, self-accepting, driven, ambitious, dominant, hostile and impulsive" (1998, p.290). In search of commonality, Caniëls, De Stobbeleir and De Clippeleer, (2014) reviewed the work of others who had researched this field including Mumford and Hunter (2005), Anderson and Gasteiger, (2008), Taggar (2002) and Feist (1999). Caniels et al. (2014) found that similarities included being open to experience, self-confidence, flexibility, self-acceptance, sensitivity and intuitiveness. Hypomania, a mild form of mania that involves reduced inhibition and elevated mood, is a trait common amongst creative individuals, especially in the presence of openness to experience and extraversion (Furnham et al., 2007).

Other characteristics of creative individuals have been identified through the use of the Five Factor Model (FFM) - or the Big Five - personality test, which has been commonly used to identify traits associated with creativity. The dimensions of this model are: extraversion, openness, agreeableness, neuroticism and conscientiousness. Openness to experience is most regularly positively associated with creativity (McCrae & Costa, 1987; Feist, 1998). King, McKee Walker and Broyles (1996) found that openness to experience and extraversion were most commonly correlated, and agreeableness negatively correlated with creativity.

Research has found that although some characteristics and traits have been linked to creativity by various researchers, there is no consensus with regards to an accurate combination comprising an 'inevitably' creative personality. However, findings relating to some regularly identified characteristics are expanded on in the following sections.

2.5.2 Comfort with adversity

Some characteristics linked with creative behaviour are associated with the ability to find comfort in adverse situations. These include comfort with risk taking and non-conformity. Bullough, Renko and Myatt (2014) did not find that adverse conditions necessarily resulted in entrepreneurial intentions, but they did find that those who were more resilient were more inclined to act on creative ideas.

Scott Kaufman reported a more direct link between adversity and creative activities:

Traumatic experiences motivated them to engage in creative behavior in a wide range of domains, including the arts and business, as well as within their relationships. This heightened motivation to pursue creative activities— also called creative growth— predicted a more general tendency to perceive new opportunities in life after the stressful circumstances. (2014, p.30)

Other researchers who have linked adversity and creativity include Csikszentmihalyi (1996) whose *flow* theory suggests individuals are able to *fully* engage themselves in a creative work experience. During the *flow* process, emotions unrelated to the task are disregarded, including stressors.

This literature, although not unequivocal, suggests stressful situations are known to lead to creative production and growth in individuals who respond positively. This may be due, in part, to how they approach risk.

2.5.3 Risk taking

Comfort with risk-taking is a characteristic widely recognised as contributing to a creative personality (Hessels et al., 2008; Shane, 2003; Casson, 2005; Chell, 2008; Fillis & Rentschler, 2010). Those with the propensity to take risks think and act more creatively in conditions that could be considered risky (Tierney, 1999). It is not only after a disaster that creative idea implementers must endure risk. It is known that there are “risks inherent in creativity” (George & Zhou, 2007, p.609). Applying creativity through social or commercial entrepreneurship involves risk because “risk-bearing is a fundamental part of entrepreneurship” (Shane, 2003, p.103). The value of potential opportunities is reduced in those who are inclined to fear failure. This presents an obstacle to creative idea implementation (Monnllor & Murphy, 2017). Yet, while this deterrent may remain for individuals not inclined to think creatively in any setting, Monnllor & Altay (2016) found fear of failure to be no greater after disaster. On the contrary, an increased number of ideas needed to alleviate disaster-induced problems results in less fear of failure. These researchers concluded that necessity-driven entrepreneurship, and a sense that there is less to lose, can combine to prompt fearless creative idea enactment. Given that implementing novelty is the role of an entrepreneur, conforming to what has been or what is widely accepted may not be an option.

2.5.4 Non-conformists

Not being like others can create tension in those inclined to take less conventional, or creative options. Griskevicius, Goldstein, Mortensen, Cialdini and Kenrick, (2006) have argued that individuals tend to believe that being like others leads to being liked which provides a sense of safety. Sternberg and Lubart (1995) explained that uniqueness means 'new' and "what is new is also strange, and strange can be scary, even threatening" (p.2). They claimed that the "tendency to imitate is sometimes so swift and mindless that it is almost automatic" (p.282). Mueller, Melwani and Goncalo (2012) have found an innate bias against creativity. Individuals would rather accept a suboptimal choice they are familiar with than risk a unique unknown option despite its potential. However, Cialdini and Trost (1998) noted that some people like to stand out. They appreciate when their uniqueness draws attention. Whether or not non-conforming results in negative experiences can depend on the company kept. According to Griskevicius et al. (2006), group norms will dictate whether those who act contrary to traditional norms are punished, rejected or ridiculed. However, a negative response may trigger creativity. Kaufman has suggested that "a need for uniqueness might fuel creativity in the wake of social rejection" (2014, p.30). Amabile (1996) also made links between deliberate rejection of social expectations and a desire for recognition through creativity. Sternberg and Lubart (1995) found that those who can create are not necessarily able to bare the repercussions of not conforming. These researchers suggest that choosing a creative lifestyle is likely to mean you must be "willing to follow a difficult path" (p.3). Perhaps the need to accommodate – or avoid – discomfort may result in a greater ability to adapt. Those who are less characteristically conventional may have honed their flexibility to live relatively harmoniously amongst those who more readily conform.

2.5.5 Adaptable and Flexible

Adaptability and flexibility are regularly discussed in the literature in association with the creative personality (Meneely & Portillo, 2005; Feist, 1999; Harvey, 2013). Baron and Markman (2003) link social adaptability, "the ability to adapt to a wide range of social situations", to successful idea implementation in an entrepreneurial context (p.42). Baron and Markman identified social skills such as social boldness and the ability to converse with people of all ages as contributing to higher levels of social adaptability. Flexible thinking is necessary if one is to be creatively adaptive (Meneely & Portillo, 2005). Csikszentmihalyi (1996) saw creative thinkers as cognitive dualists, both controlled and automatic, or complex thinkers who can move with ease from one extreme thought to another. Metzl and Morrell (2008) have written of flexibility and creative adaptability in connection with disaster response and recovery. They stated that one intention of researching the link between resilience and creativity was "to suggest that creativity could be an inherent predictor and facilitator of resilience". Metzl and Morrell found that in a clinical sense nonlinear or divergent thinking could

be embraced as “facilitators of healing” (2008, p. 315). Metzl and Morrell (2008) concluded that creative adaptation was a form of resiliency, but one that involves a novel approach. This notion concurs with earlier discussion in relation to links between creativity and resilience. Monllor and Altay (2016) claimed that post-disaster entrepreneurship demands particularly adaptable activity. Therefore, they suggested it would be difficult to create in the aftermath of a disaster if the creator was not prepared to be adaptable. Adapting can involve challenges. However, the literature reveals that this is unlikely to be a deterrent.

2.5.6 Challenge Seekers

Among others, Csikszentmihalyi (1996) found that creative individuals experience greater enjoyment when required to solve a problem or relieve tension. Pannells and Claxton (2008) suggested the need for challenge becomes something of an inescapable natural state:

Creative ideation requires individuals to have an acceptance of chaos as a fact of life; yet be able to make order from the chaos by finding solutions to problems and have the ability to derive pleasure from the process of problem-solving. (p.68)

The enjoyment of challenge leads to the pursuit of it. Dollinger, Urban and James (2004) made a connection between openness to experience, which they claimed has been linked with creativity in almost every measurement or scale used to assess creativity, and the need to feel challenged. Other researchers have noted that creative individuals demonstrate other characteristics known to support challenge-seeking. For instance, Galang, Castelo, Santos, Perlas and Angeles (2016) associate boldness with creativity and Feist (1998) links creativity to self-confidence. Accepting challenges requires individuals to bear uncertainty. Tolerance for ambiguity is another trait associated with creative people (Merriotsky, 2013; Martinsen, 2011; Shane & Nicolaou; 2013; Meneely & Portillo, 2005; Csikszentmihalyi, 1996). Uncertainty can be caused by ambiguity. Embracing an ambiguous situation, with an unpredictable outcome can be enjoyably challenging for those comfortable with the uncertainty creative approaches tend to involve. However, creative people are also regularly associated with suffering (Feist, 2010). This suggests vulnerability and acute awareness can also be associated with a creative persona. The introvert and the extrovert meeting in one individual may have a profound effect.

2.6 Tension and sensitive qualities

Paradoxes and tensions in the make-up of a creative personality are a common theme in the literature (Barron, 1963; Helson, 1999; Feist, 1998; 2010). Creative individuals have been found to have both dynamic and sensitive qualities. Dynamic, in the context of this study, refers to the possession of energy and enthusiasm, likely to result in the initiation of activity and idea generation.

They may find themselves compelled to express ideas, enthusiastically, while simultaneously feeling anxious about doing so. Perhaps fearful of negative repercussions? It is thought that these tensions resulting from internal struggle could result in creativity (Sternberg & Tardif, 1988). Galang (2010) suggested that:

While acclaimed as revolutionary and pioneering visionaries, the same category of people can come across as unsocialized and discomfiting even to their close associates and admirers...and venture to the margins of what is known and thus risk being lost, interminably marooned beyond the reach of civilization and sanity. (p.1241)

Csikszentmihalyi (1996) explained that passionate and more 'orderly' thinking can exist simultaneously within a sensitive, open creative person. This may lead to suffering as well as joy: acting on thoughts inspired by passion could result in actions that lead to mental 'disorder' (discomfort) once a person with both sensitive and dynamic qualities returns to a more reserved state of mind. Links between creativity and 'madness' have also been long debated:

The knowledge of a link between creativity and madness has persisted throughout history. Socrates and Plato were both aware of the association, while over the past century questions of creativity and madness have entered the world of scientific research, fuelling debates about the nature of this association. Despite its sceptics, it is now generally accepted that the link is empirically grounded. (Glazer, 2009, p.754)

Glazer (2009) found that creativity as a more complex concept, as opposed to a simpler construct that traditionally centres around divergent thinking, can be connected to mental illness. Glazer stated that "creativity as a dimensional concept predicts a higher prevalence of mental illness among the Kuhnian (1970) 'revolutionary' work than the 'normal' (Simonton, 2000), as seen in Outsider Art and among eminent versus everyday creators" (2009, p.763).

Carson, Peterson and Higgins (2003) found that creative people may possess a low level of the trait latent inhibition (LI). This can lead to reduced ability to ignore stimuli that others may consider unworthy of notice. A higher IQ may result in enhanced ability to manage excess stimuli and to utilise it as raw material for creative thinking. Carson et al. (2003) concluded that those less equipped intellectually could, instead, find themselves unable to manage unwelcome thoughts. They may respond in ways judged by a norm-orientated society as mentally deficient.

There appears to be abundant evidence linking tension with creativity. It appears that certain characteristics and traits are necessary moderators if creative ideas are to be successfully implemented, or implemented at all. It also seems reasonable to consider that tension could be the

result of sensitive qualities being activated simultaneously with dynamic characteristics, perhaps creating an internal battle that finds its outlet in creative behaviour.

2.7 Dynamic qualities

Researchers have associated creative idea implementers with a range of dynamic qualities, including self-efficacy and curiosity (Merriotsky, 2013) and drive and ambition (Feist, 1998). Dynamic tendencies appear to be an important factor in creative idea implementation and this has been particularly emphasised in relation to entrepreneurship.

2.7.1 Characteristics of an entrepreneur

Those who implement creative ideas for social or commercial gain after a disaster are entrepreneurs by definition. Pupavac (2015) found that “Entrepreneurs are usually enthusiastic, driven personalities, unabashed of taking the initiative and leaping forward” (p.133). Entrepreneurship incorporates, but is distinct from, creativity. Heinonen, Hytti and Stenholm (2011) argued that creativity can have a positive impact on the viability of a business idea: “Creativity is an important antecedent of entrepreneurial intentions” (Hamidi, Wennberg & Berglund, 2008, p.304). According to Carton, Hofer and Meeks:

Entrepreneurship is the pursuit of a discontinuous opportunity involving the creation of an organization (or sub-organization) with the expectation of value creation to the participants. The entrepreneur is the individual (or team) that identifies the opportunity, gathers the necessary resources, creates and is ultimately responsible for the performance of the organization. (1998, p.1)

Entrepreneurship involves creating “means-ends relationships”, or more simply, problem solving (Shane & Venkataraman, 2000, p. 220). Entrepreneurs possess “the ability to identify opportunities and create new markets” (Smith, Bell, & Watts, 2014, p. 203). This applies to traditional, commercial entrepreneurs *and* social entrepreneurs, who are generally known to have similar aspirations regarding enterprise growth but are “primarily driven by the provision of perceived social value” (Smith et al., 2014, p.203). In comparing the personalities of traditional and social entrepreneurs, Smith et al. (2014) found that social entrepreneurs demonstrated markedly increased levels of creativity, consideration of risk-taking, and had a higher need to be autonomous and independent than do traditional entrepreneurs. With reference to Bason (2011), they suggested that:

There is a possibility that social entrepreneurs are inherently more entrepreneurial in academically conventional terms than their traditional counterparts ... Social enterprises face the problem of leveraging resources within tight parameters, including limited

funding and complex legal and legislative constrictions, which can potentially stifle the ability to innovate and be creative. (2014, p. 216)

More traditional commercial, as well as social, entrepreneurs are both found to be concerned with managing scarce resources to create a profit, although with different values and aspirational goals as not all measure profit in financial terms. The value added may be prosocial. However, regardless of specific goals, entrepreneurs' common ground legitimises their being studied in a combined fashion. This is supported by Stephan and Drencheva (2017) who stated that "certain extrinsic and intrinsic motivations are shared by commercial and social entrepreneurs. Social and commercial entrepreneurs also seem to exhibit similar entrepreneurial personality traits" (p. 205).

Opinion varies in the literature in relation to the trait of agreeableness and its association with entrepreneurship. According to Martinsen (2011), agreeableness can lead to flexibility, often thought to be a desirable attribute in enterprise development. It is also known to be of value at the invention stage of the entrepreneurial process, although not during the opportunity exploitation phase (Leutner et al., 2014). Shane found that "people possessing this aspect of personality are less likely than other people to exploit opportunities", or implement a creative idea to meet a perceived need (2003, p.99). Chell (2008) has indicated that management tend to gain higher scores in personality tests for agreeableness than do entrepreneurs. Agreeableness is not known to play a role in enterprise longevity. The literature suggests a range of dynamic qualities employed by entrepreneurs as they implement ideas. However, agreeableness – despite a positive link with flexibility – is believed to hinder aspects of novel idea implementation by entrepreneurs. If an individual is too agreeable they may be perceived as "too nice" to succeed in the competitive business world. According to Fertik, "being too nice can be lazy, inefficient, irresponsible, and harmful to individuals and the organization" (2014, p.1).

Researchers have identified some common personality characteristics believed to influence entrepreneurial behaviour. Openness to experience is regularly linked to both creativity and entrepreneurship (Ivcevic & Brackett, 2015; Shane, Nicolaou, Cherkas, & Spector, 2010). According to Shane (2003), personality aspects that influence idea exploitation significantly are extraversion, need for achievement, risk taking and independence. Although some scholars, including Chell (2008), have expressed doubt about the significant role of extraversion in entrepreneurship it has been more commonly viewed as valuable at the exploitation and implementation stages of a new venture (Shane, 2003; Leutner et al, 2014; Fillis & Rentschler, 2010; Liang et al.,2015). Miller (2015) asserted that extraversion is necessary as "entrepreneurs frequently must vie against established organizations that have more resources" and "must capture trade from rivals" (p.1).

A need to achieve is another characteristic associated with entrepreneurs. Chell (2008) explained that “the need to achieve is a drive to excel, to achieve a goal in relation to a set of standards. A person endowed with such a need will spend time considering how to do a job better or how to accomplish something important to them” (p.88-9). A need to achieve has also been identified as a positive influence on entrepreneurial behaviour by others, including Fillis and Rentschler (2010) and Martinsen (2011). In addition, risk-taking has been fundamentally linked to entrepreneurship in the work of Sternberg (2002), Shane (2003), Merrotsy (2013), Scott (2012), Chell (2008) and Biraglia and Kadile (2017). So, too, has the desire for independence (Hessels et al., 2008; Martinsen, 2011; Miller, 2015), which can be associated with rebelliousness.

2.7.2 Rebelliousness

Cialdini and Trost (1998) have suggested that entrepreneurs may be viewed as a disruptive influence and their entrepreneurial activity as threatening. Schumpeter’s (1934) classic model of an entrepreneur involved individuals who were prepared to dismantle and reconstruct existing, traditional structures. A willingness to question the status quo is required if novelty is to be achieved (Obschonka, Andersson, Silbereisen & Sverke, 2013). The strong association between creativity and divergent and flexible thinking indicates a propensity for creative individuals to be prepared to consider alternative means to achieve goals as a matter of course. In this sense, being creative could be considered synonymous with being rebellious. Mokyr (1992) stated, with specific reference to technological creativity, that “all creativity, is an act of rebellion” (p.viii).

While the sections above have discussed a range of personal characteristics that may have bearing on how creative idea implementation proceeds after a disaster, how others may have influenced their actions should also be considered. The following sections review literature in relation to how family, educational experiences and other contexts may be influential.

2.8 Family Influences

The context in which one is raised and develops seems likely to have long term effects on conscious and sub-conscious decision making in adulthood. Certain norms can be established that lead to greater comfort or ability with regards to implementing a creative idea. For instance, positive affect is believed to enhance creativity in individuals (Shalley & Zhou, 2003). Supportive encouragement and validation from influential individuals may foster creativity. So, too, may an environment that is encouraging of and receptive to creative approaches. However, as will be discussed, there is also significant support for negative judgment from others prompting creativity.

Rogers (1959) and other researchers such as Harrington, Block and Block (1987), are among those who have championed the notion that parental support directly aids creativity. Isen (1999), Forgas

(2000), Hirt (1999), Feist (1999) and Madjar, Oldham and Pratt (2002) found links between positive mood stemming from a supportive upbringing and creativity. Aghion, Akcigit, Hyytinen and Toivanen (2017) claimed that inadequate parental support for those with high creative skills is potentially particularly damaging. However, they also state that IQ can surpass family background in importance as a contributor to creativity development. Research has also suggested that support be provided with limited restrictions on behaviour. Popescu, Richards, Strand and Abramowitz (2015) argued against too much control. They found that “a serious barrier to creativity is the authoritarian parenting style characterized by a high level of control, which inhibits any initiative from the child” (p.602). A child experiencing, or an adult who experienced, these conditions may feel uncomfortable expressing or acting on creative ideas, so choose not to do so. This is supported by Wallace & Wahlberg (1995). Their study of eminent women, or successful adult females, revealed that “nearly 9 out of 10 were allowed to explore their environments on their own” and that “large percentages of the sample were exposed to stimulating family, educational and cultural conditions during childhood” (p.98). Parental influence on creativity may, however, reduce as a child ages. Bell, Chetty, Jaravel, Petkova and Van Reenen (2015) found the impact of parental support waned as children grew and developed, particularly in relation to parental income: “When children begin with identical traits, having low-income parents may hold children back from becoming innovators because of a lower quality education, neighborhoods, mentors, or jobs opportunities” (Bell et al., 2015,p.2).

Nui and Sternberg (2003) found that in environments where creativity is accepted, creativity flourishes. Kwaśniewska, Gralewski, Witkowska, Kostrzewska and Lebuda (2018) identified that the way parents engage, behave and the attitudes they express can contribute to fostering a climate in which it feels comfortable to create. However, parents need not be creative themselves to influence creative development in their children. Waller et al., (1993), focus on physiological factors and “propose that the personality core of creativity is heritable but not familial”, thereby suggesting a parent’s fostering of any particular climate will not necessarily impact on a child’s creativity (p.237).

Nevertheless, there is support for a link between unconventional behaviour in the home and a willingness or propensity to create. Cialdini and Trost (1998) suggested that growing up in a home where a parent supports or models unconventional behaviour might lead to an individual acting unconventionally themselves as they have learned that breaking conventions is acceptable. Norms are highly influential: “The social influence process is an undeniably central component to social interaction” (p.180).

Parental values also contribute to the development of less conventional behaviour. If parents espouse and role model specific values it seems their children are likely to emulate them. Janoski and Wilson (1995) explained that Durkheimian theory indicates that socio-economic status and parents’

social influence are key contributors to volunteer participation. It seems that with regards to the development of a social conscience, as with an appreciation of novelty and the unconventional, “children resemble their parents” (p.272).

Continuing with the consideration of the links between entrepreneurship and creativity, entrepreneurial and aspirational values also appear transferrable cross-generationally. Eesley and Wang (2017) provided an overview of key aspects relating to parental influence in the entrepreneurial literature. They found that “having entrepreneur parents is one of the strongest determinants of whether an individual will become an entrepreneur” (p.639). Bell, Chetty, Jaravel, Petkova and Van Reenen (2019) found early exposure to innovation was an indicator of future inventiveness. They claimed that:

We have directly established the importance of environment by showing that exposure to innovation during childhood has significant causal effects on children’s propensities to invent. Children whose families move to a high-innovation area when they are young are more likely to become inventors. These exposure effects are technology, class and gender specific. (Bell et al., 2019, p.647)

2.9 Educational Influences

Beyond family, educational experiences are thought to influence individuals. How easily or willingly those with unique or unconventional approaches or behaviour ‘fit in’ to a school’s culture can be significant correlates of creative development and expression. Kahane (2011) stated that a teacher may provide a contrast with the norms experienced at home: “Here is someone who not only knows the subject very well, but is also more empathic and free-thinking than your parents, someone who presents a wider and more interesting world than other adults” (p.121). Besançon, Fenouillet and Shankland (2015) made a more direct link between inspirational teachers and the creativity of their students. They claimed that “educational methods may impact creativity directly or indirectly through motivation and well-being” (p.1). By contrast, a more traditional school culture, and teachers who rigorously adhere to traditional school rules, can have a negative effect on a student’s educational experience. Mellou (1996) explained that this type of environment can negatively affect creativity development due to exercises that tend to support convergent thinking “leaving little room for divergent thinking, moreover, creative thinking” (p.2). This research implies that creative development can be influenced by both teachers and school culture.

Perry-Smith and Mannucci (2015) found that the personality literature tends to support the assumption that creators like to create alone and be the “lone genius” (p.3). However, they found this to be inconsistent with how many creators work. The influence and support of others is

important, be that in a family, educational or wider community context. The researchers noted that novel idea generation was enhanced by interaction and exchanging thoughts with others. Perry-Smith and Mannucci's (2015) work concurred with that of Feldman (1999) who concluded that "the enduring belief that great creativity is developed largely alone, without assistance from teachers, mentors, peers and intimate groups is largely a myth" (p.176). The literature suggests context and influential individuals or systems can impact on both the development of creativity and the willingness to create. Motivation may be the key. The next section provides an overview of the literature concerning the role of motivation in the creative process.

2.10 Motivation

What drives those who implement creative ideas? Hennessey and Amabile (1998), Ryan and Deci (2000), Shin and Zhou (2003), Prabhu, Sutton and Sauser (2008) have all identified the importance of the development and sustenance of intrinsic motivation as a pre-cursor to successful creativity. On the other hand, Eisenberger and Cameron (1996) and Cameron and Pierce (2004) strongly defend the role of extrinsic motivation in the creative process. However, critics of the latter view believe extrinsic motivators are short-lived. West et al. (2006) stated that "because creativity requires a non-constrained, undemanding environment external demands have a negative impact" (p.142). There has been intense debate about the merits of each and the relationship between the two forms (Eisenberger & Cameron, 1996; Cameron & Pierce, 2004; Deci & Ryan, 2000; Amabile, 1996; Hennessey, 2003).

Although highly valued, particularly as a component of The Componential Model of Creativity, intrinsic motivation is also "quite susceptible to social-environment influences" (Hennessey & Amabile, 2010, p.581). Runco stated that "some kind of tension must precede the intrinsic motivation that characterizes creative effort" (p.102, 1994). Perhaps the tension is a response to an individual's environment. However, the tension may also be the desire for the experience, as enjoyment of the experience is expected if one is intrinsically motivated. Anderson and Gasteiger (2008) have observed that intrinsic motivation has been found to be an important stimulator of creativity in the absence of financial reward. There is a strong connection between intrinsic motivation and risk-taking. Enjoyment generated by intrinsic motivation can provide compensation for the psychological experience of loss in another dimension. Those who are motivated by a desire to be immersed in the task itself, as opposed to any extrinsic or external reward, will find their willingness to risk failure is mediated by the joy they experience through involvement (Dewett, 2006).

It has also been suggested that one form of motivation can result in the other - i.e. someone may be initially extrinsically motivated but become intrinsically motivated during a process that is particularly

enjoyable, stimulating or satisfying. In the Dynamic Componential Model of Creativity (Fig.2.3) (Amabile & Pratt, 2016), for example, extrinsic motivation can lead to the development of intrinsic motivation once the creative process has begun. Grant and Berry's findings regarding the positive effect of prosocial motivation appear to have informed Amabile & Pratt's work that shows meaningful work could "strengthen the relationship between intrinsic motivation and creativity" (Grant & Berry, 2011, p.8).

2.11 Creativity in a post-disaster setting

No literature with a direct focus on support of creativity in a post-disaster setting has been found. Therefore, the research discussed in this section in relation to the impact of the setting on creativity, is predominantly gathered from data gathered in organisational settings. That is, this literature has been reviewed as proxy. A link has been identified between context and creativity. Rhodes (1961) established that creativity must involve the 4 Ps - person, product, process and press. The press refers to the setting in which the creativity takes place. Rhodes stated that "environmental factors at all times in life form a psychological press that may be either constructive or destructive to creativity" (p.305). Creative output, such as inventions, have "social causes and retarding factors" (Rhodes, 1961, p.309). More recently, Glaveanu (2013) updated the 4 Ps framework by creating the 5 A's framework—actor, action, artefact, audience and affordance. Press is split to become audience (social context) and affordance (material). Regardless of framework, environment has been shown to be conducive to effective or prolific creativity as it impacts on mood. An emotional response in humans is elicited by "a complex cognitive appraisal of the significance of events for one's well-being" (Lazarus, 1982, p.1019). That is, context affects mood.

There is agreement that some environmental factors positively affect creativity. Environmental conditions that encourage positive mood can result in happiness and a sense of being at ease. George and Zhou (2007) found that positive mood can lead to playful and expansive, divergent thinking which prompts the generation of new ideas. However, as discussed, negative emotions can also be motivating. George and Zhou (2007) found that tension can enhance determination to use creative problem solving skills to address negative issues. Negative emotions alert them to problems quickly. If individuals feel supported in their working environment the issues causing tension may be addressed swiftly, allowing progress to resume. Other researchers have suggested all moods play a part in the creative process. Bledow, Rosing and Frese (2013) offered support for an "affective shift" in mood being needed to promote creativity. This refers to an increase in creativity resulting from a person who, after experiencing negative affect, experiences a decrease in negative affect before an episode of increased positive affect. Bledow et al. (2007) suggest that "creativity may be drawn from

the whole spectrum of affective experiences...including negative feelings such as anxiety, frustration, and distress" (p.432).

Negative and positive experiences - supportive or unsupportive environments - may be influenced from the 'top'. Leadership style is thought to affect an environment and, in turn, have an impact on creativity. Shalley, Zhou and Oldham (2004) found that creators flourish when creativity is a legitimate aspect of the goals they determine. This suggests, as Tummers and Kruijen (2014) noted, that a sense of autonomy is important to the creative worker. Jamil, Omar and Panatik (2014) agreed. As previously mentioned, autonomy, along with mastery and relatedness, is a component of Ryan and Deci's (2000) Self Determination Theory. Each component contributes to intrinsic motivation, believed to be crucial in an effective creative process (Amabile, 1983, 1988, 1996). Matthews (2007) claimed sensing trust from others in creative ability is important to creators. This is an important aspect of psychological safety. As described by Edmondson and Lei (2014), "psychological safety is fundamentally about reducing interpersonal risk, which necessarily accompanies uncertainty and change" (p.24). Psychological safety also stems from how individuals perceive the consequences of taking a course of action within a particular context. Feeling autonomous - confidently in control - can enhance psychological safety that fosters and enhances creativity.

Mumford, Scott, Gaddis and Strange (2002) found that leaders who garner respect are most effective at encouraging creativity. Respect is greatest for leaders who are technical experts and have social skills that allow them to support and encourage creative people to evaluate their own efforts. Such leaders appreciated that acts of recognition are "powerful motives" (p.710). Positive, or at least constructive, feedback, and a sense that creative work is valued are other contributors to psychological safety (Hennessey & Amabile, 2010).

However, factors known to hinder creativity can also stem from leadership. Mumford et al. (2002) have identified that visionary leadership may be unnecessary as "creative people are already motivated autonomous entities where the imposition of an external vision seems, if anything, to inhibit performance" (p.738). Time pressure is also likely to reduce enthusiasm (Shalley et al., 2004). So, too, is constant checking of assigned work and failure to communicate necessary information (Hennessey & Amabile, 2010).

Some researchers have claimed that creativity is so domain specific, and the personality and contextual variables so vast and unique, that aiming to determine optimum conditions for creativity may be futile. Different phases of the creative process require different skills (Perry-Smith & Mannucci, 2017). Each phase presents its own challenges. Caniels, De Stobbeleir and De Clippeleer (2014) concurred, stating that different personalities respond differently in different phases. They

explained that the same individual may thrive in one aspect of the process, but suffer in another. Caniels et al. provided the example that “characteristics such as openness to experience and independence might engender the kind of exploration required for idea generation, but may not help the creative individual when promoting or implementing the idea” (2014, p.98).

Finally, in relation to context, cultural influences can affect how someone responds creatively to a specific environment. Baer (2016) emphasised that creativity does not develop in a vacuum. He provided an example of Chinese workers who produce fewer original ideas when working in the company of a supervisor. The Chinese workers exhibited sensitivity to the needs of their employers, but the “Americans were more sensitive to the presence of peers” (p.23). The literature suggests that leadership is likely to have an impact on any environment in which creative ideas are implemented. Therefore, it is an important aspect to consider when ascertaining how creativity proceeds in a post-disaster zone where leadership has been destabilised.

2.12 Summary

In preparation for a meta-analysis review of the creativity literature published in the first decade of the millennium, Hennessy & Amabile (2010) asked scholars to identify research papers about creativity they considered highly significant. They found it interesting that they struggled to find agreement amongst scholars across domains. Few papers were identified by more than one scholar. Their conclusion was that the creativity literature was extremely fragmented, with each domain (e.g., the various branches of psychology) travelling on its own path, largely unaware of what others were discovering. In excess of seventy peer-reviewed articles were read or consulted in preparation for this study’s literature review.

Psychological research has dominated the study of creativity, aside from work by disaster researchers with a sociological focus. Amongst the most valuable sources of knowledge about communities after disaster were those from disparate times and situations. The intensive post-war research of sociologist and disaster research pioneer, Charles Fritz, was studied in unison with the comprehensive overview of post-disaster communities throughout the twentieth century by contemporary political and social commentator, Rebecca Solnit. Similar conclusions were reached about how humans behave in post-disaster communities, despite the authors’ differences in intent, method and media. Unlike the creativity literature, there is much more consensus regarding post-disaster communities and the space for creativity within them. The work of Fritz and Solnit demonstrates that it is common for communities to respond positively, and together, to the challenges that face them. A power vacuum tends to appear, and is available to be filled by those who are able to act quickly to meet the needs of their stricken community. However, this situation tends to be short-lived, and ends when power is reinstated and ‘normal’ returns. Also, in more recent

times, as Klein (2007) has reported, the power vacuum may be occupied by those with prepared agendas, whose goals are financial and political, rather than prosocial.

Entrepreneurial idea enactment was critically explored in this chapter. This literature is considered general enough in context to be suitable grounding in which to scrutinise the accounts of both social and commercial entrepreneurs after the earthquakes. Entrepreneurial literature has been consulted and relied on due to the dearth of literature that specifically links creative idea enactment to *any* other field, let alone disasters. There is some agreement in relation to creative characteristics. Creative people and entrepreneurs are believed to share common characteristics. However, the literature has revealed that a creative personality is more inclined to include sensitive, anxious or introverted aspects, while an entrepreneur's make-up will more likely be comprised of dynamic – forceful, high energy - aspects. Interestingly, scholars have found these characteristics and traits like extraversion and agreeableness can produce both creativity enhancing and diminishing effects within the same individual at different stages of the creative process.

Research concerning the role of motivation in the creative process is plentiful (Hennessey & Amabile, 1998; Ryan & Deci, 2000; Shin & Zhou, 2003; Prabhu, Sutton & Sauser, 2008). This is, in part, due to the debate about the merits of extrinsic and intrinsic motivation in creativity. Overall, it has been found that extrinsic motivation tends to be initially effective, so could be regarded as a catalyst. The important role of intrinsic motivation does not appear to be in doubt. Nevertheless, it is acknowledged that extrinsic motivation can lead to meaningful work, perhaps for prosocial purposes, which triggers intrinsic motivation, and allows creativity to be sustained.

Finally, the antecedents and obstacles of an environment conducive to creativity have been discussed. In all areas - social, educational and organisational - psychological safety appears key. A range of scholars believe individuals are most effectively creative when happy and well supported. However, other researchers disagree with this, believing negativity or discomfort encourages and develops the problem solving ability and resilience that leads to creativity and ability to persevere with creative idea implementation. This study will explore what impact the overtly negative aspects of the post-disaster setting had on creative activity. A similar approach will be taken with regards to any joy that emerged as a consequence of events. Again, these areas of the creativity literature are dominated by psychologists. There seem to be a relatively small, but prolific, number of researchers who have investigated the development of creativity in the home and wider social settings.

Creative activity and improvisation have been studied in disaster settings, although often as contributors to resilience, a form of therapy, or in relation to organisation and process. An aim of this study is to add knowledge to understanding why creative people act as they do at a time when most are feeling frightened and powerless. The study will investigate factors that contribute to the success

or failure of novel ideas implemented during a period of shock and uncertainty. The next chapter discusses the methods used to gather the data required to obtain this knowledge.

Chapter 3

Methods and Methodology

3.1 Introduction

This chapter will outline the methods and methodology used in this study. Firstly, the research approach is explained, followed by an account of how the participant sample was selected, categorised and coded for identification throughout the results and discussion. Interviewing as the chosen method for data gathering is overviewed followed by a detailed description of the interview procedure. Next, the Ten Item Personality Inventory (TIPI) survey completed by participants at the time of interview is described and discussed in order to justify its use as a supplementary method of data gathering and explain its validity. How the data was processed, transcribed, coded and analysed is detailed, as is justification for the use of chosen methods and procedures to provide assurance of quality and robustness. Ethical considerations are also outlined. My positionality in relation to this study is explored. Finally, the post-earthquakes setting is discussed as a context worthy of close inspection and analysis.

3.2 Research Approach

Given the research questions and objectives, a constructivist/interpretivist approach was chosen because researching from within this approach means investigating with the understanding that no objective social reality exists. Constructivists believe in “a subjective reality that consists of stories or meanings ground in ‘natural’ settings” (Hesse-Biber, 2010, p.455). This approach assumes a relativist ontology, as based on the perspectives of Blumer’s (1969) symbolic interactionism, which espoused the notion that meaning was generated through human interactions with others and contrasted with the dominant positivistic approaches of the time (Mills & Birks, 2014, p.5). This ontological view is assumed due to the relatively unique context which has “local and specific constructed realities” (Guba & Lincoln, 1994, p.109).

The methodological approach has been selected due to the study’s exploratory nature. This approach was adopted as the study involves exploring relatively ‘unknown territory’ as research that has *directly* investigated creativity in a post-disaster setting appears scarce. This means methodologies and methods that offer, as stated by Hesse-Biber (2010) “a multi-layered view of the nuances of social reality” and “tend to be open to new information” (p.456) are required. The findings emerged through inquiry that generated the analysis and interpretation. In research that investigates data able to be counted or measured it must be replicable. However, qualitative data, such as that acquired via interviews, are gathered to garner social or personal meaning. Hammarberg, Kirkman

and de Lacey state that “we need to be able to capture real-life experiences, which cannot be identical from one person to the next” (2016, p.499).

3.3 Research Methods

This research predominantly relied on qualitative methods, specifically semi-structured, in-depth interviews with participants who had implemented a creative idea since the first major earthquake of September 2010. This was considered the most suitable form of data gathering to meet the objectives of the proposed study. Rich, multi-faceted information was accumulated with the intention of obtaining as many of the relevant meanings and accounts as possible. Using interviews to obtain information was considered most appropriate, largely due to the variety in content and complexity of participants’ post-quake circumstances, and creative ideas. Interviews allowed for flexibility, the chance to probe issues that arose, clarify questions and the opportunity to note and respond appropriately to sensitive subject matter (Kumar, 2005).

3.3.1 Interviews

The interview process went as follows. I would meet a participant in a cafe, usually of their choice, in Christchurch city. A small number of interviews took place in a participant’s home, and several others in places of work. Allowing interview subjects to choose the venue was done as a courtesy to those giving up their time to contribute to the study as well as to allow them to relax and share information that would become rich data. The relative informality of each meeting, often over coffee, helped create a sense of trust.

Each participant had received a comprehensive research information sheet (Appendix F) about the research project before the interview. Each was required to sign a consent form, which they completed after initial introductions had been made. They had also been told that their comments would remain anonymous to all but myself and my research supervisors. This hopefully contributed to interviewees’ sense of trust, knowing they could speak freely without fear of repercussions. This was completed in accordance with prior approval of the conditions by the Lincoln University’s Human Ethics Committee (Appendix D). Once the consent form was signed I asked each participant to complete a short personality survey, the ten item personality inventory (TIPI) comprehensively detailed in the following section.

The semi-structured interviews that took place consisted of questions relating to various themes (Interview Question Guide, Appendix H). Specific themes included childhood and background, parents, education, pre-earthquakes’ work experience, during and post-earthquakes’ experience. Each question was worded with the intention of encouraging the widest range of possible responses. The interviews were semi-structured in order both to ensure that issues of specific interest were not

overlooked during the interview process, and that enough flexibility remained to allow probing of lines of enquiry that emerged during the conversation. To achieve this end, the planned interview was a guide rather than a schedule. As Lofland et al. (2006) state, it is important that interviewees are allowed to “speak freely in their own terms about a set of concerns you bring to the interaction, plus whatever else they might introduce” (p.105).

Overall, I would describe the nature of the interviews as largely organic and structured as conversation. I allowed the interviewees to digress tangentially in the hope they would reveal information pertinent to the study that I may have not thought to ask. This proved to be the case. Much of value was provided as a result of the interview not being tightly structured. The interviews took place between December 2015 and November 2016. Each interview took between 30 and 60 minutes.

The emerging findings revealed are the personal accounts of the 45 participants. Quarantelli (1995) clarifies that perspectives are important in the search for knowledge as “everyone can provide singular subjective insight into the phenomena that others might not see”. This results in a fuller, combined understanding (p.234). Participants’ testimony will be considered the ‘reality’. There would be little reason to assume that their answers were not sincere, at least to them. Their first-hand accounts are considered valid data in a study predominantly about influences and responses.

3.4 Participants and Sampling

The criteria for selecting interview participants was as follows. Each individual had to be considered the primary driver in the enactment of a novel creative idea implemented, for either community or commercial benefit, in the Christchurch region since September 2010. The novel idea had to be worthy of being described with, at least, several of the following adjectives: new, unique, original, unexpected, innovative, courageous, non-conforming. If not completely original, the creative idea had to be at least new and untested in this geographical location or context. At the time of implementation the general response to the idea would have been unpredictable.

The goal was to recruit as many participants as possible in order to reach a satisfactory ‘saturation’ point with regard to obtainable data (Kumar, 2005). Initially the aim was to recruit a sample of between 30 – 50 participants. I eventually interviewed a total of 45 participants. This was satisfactory as saturation was achieved (Mason, 2010). This became apparent when responses from participants interviewed later frequently echoed responses of those interviewed earlier.

A long list of possible participants was compiled, after which those who most clearly met the aforementioned criteria were approached with a formal letter, via email or occasionally Facebook’s messenger, inviting them to participate. Twenty-six of the participants were purposefully approached

due to being featured in the media in relation to their creative ideas. 'Snowball' sampling, was an additional means of recruiting participants. Interviewees sometimes alerted me to others whose ideas were less well publicised but whose methods met the participant criteria (McNeill and Chapman, 2005). Nineteen were either suggested by other participants (snowball sampling) or referred by organisation leaders in a position to know individuals who would meet the study criteria. The participants were chosen from the general population, but it was difficult to identify potential participants in the wider population unless they had received some form of attention or publicity for their creative idea enactment. To negate this possible source of bias, a larger sample than was necessary was selected. This allowed for a diverse sample that included a broad range of domains and age groups.

The sample comprised 23 men and 22 women. Six of the sample group were aged in their sixties, nine in their fifties, nine in their forties, 14 in their 30s and seven in their twenties. Fourteen of these participants were involved in creative ventures that had commercial goals, while seven could be considered commercial at least to the extent of remaining in existence until the time of the study (some five years after the two major earthquakes). Two participants were acting in their roles as employees of government departments and 17 were operating for either a social enterprise, not-for-profit organisation or creating – often public - art work. The diversity of domains, ages and genders ensured a wide variety of perspectives would be gathered, with each participant sharing the experience of operating in a post-disaster setting. The sampling techniques and snowball sampling combined to produce a rich array of data that, as mentioned, allowed saturation to be achieved.

Table 3.1 provides codes that will indicate the primary focus of each participant's venture when their views are used as examples in the results or discussion sections. Social/Community (S) refers to those whose primary motivation was prosocial, for example some social entrepreneurs and all volunteers. They did not act for personal financial gain. Commercial (C) refers to those participants who were primarily business people. Most had prior business experience. However, each commercial entrepreneur interviewed had either established a new business based on a novel idea or adapted an existing one in a novel way in Christchurch since September, 2010. They enacted a creative idea primarily - although rarely wholly - in the hope of making a financial profit. Social and Commercial (SC) indicates those whose creative idea was implemented with the primary goal of delivering material or social benefits to the afflicted community, but needed to accumulate funds through the venture to allow, at least, its sustainability. Art/Entertainment (A) denotes the artists of the participant group. Visual, sound and conceptual artists were included. Most had worked artistically prior to the earthquakes, but those interviewed had each created and presented their art for public benefit in the form of either entertainment, expression, communication or symbolic representation in the post-disaster period. Their post-earthquakes work was the focus of the interview.

Table 3.1: Participant codes

Code Type	Purpose of Creativity
S	Social/community
C	Commercial
SC	Social and commercial
A	Art/Entertainment

3.5 Data Processing and Analysis

The audio recorded interviews were transcribed into hard copy form for coding and physical archiving. Personally, I found useful analysis of participants' comments took place during transcription. The need to capture each word, often several times to hear precisely what was said, brought the content of these words and accounts into sharp focus. During this process I had the opportunity to fully engage with each participants words, which was not always the case during an interview. While interviewing there could be distracting concerns, such as what to ask next, when to steer the conversation to avoid excessive deviation from material relevant, or potentially relevant, to the research questions, and technical issues such as ensuring the continuous performance of the recording device. These things could interfere with the intensity of aural engagement.

Once I had completed the 45 transcriptions coding could begin. However, initial coding had already occurred during the transcription process as I had highlighted sections of the data that immediately appeared to be of value for addressing the research questions.

The next phase of coding involved using a qualitative data coding software programme called MAXQDA. This allowed me to categorise the data thematically. Major themes were created prior to coding beginning. These were ones known to be essential in relation to the data needed to address the research questions, such as, for example, characteristics, motivation, family, education, past experiences, earthquake experience, supportive factors, and obstacles. Within these sections I allowed subsections, or sub-themes, to emerge from the data as they would; for instance, prosocial motivation, desire to make a difference, dislike of school, father's influence etc, I ultimately created many sub-themes and considered each carefully. Those that were most repeated by a range of participants became of most significance as commonality of experience was considered important,

particularly in comparison with what is known to be typical in more routine (i.e. non-disaster) settings.

Ultimately, the initial key themes proved to remain most significant. All information was thoroughly considered and oft-repeated participant experiences and perspectives were synthesised with more nuanced ones within similar themes to populate each section of results, namely: characteristics; motivations and influences; supportive and enabling factors and obstacles to creative idea enactment. During both the coding and the writing stages, consideration was given to whether or not the enablers or obstacles could be seen as distinctly disaster-related, or pre-existing or character-based. My goal in the results section was to present data that illustrate what I perceive to be the most significant findings.

Once the data were synthesised into sections relating to aspects of the research question, theorising – which had occurred ‘informally’ from the outset of the study – began in earnest. This was mainly done by comparing the findings of this research with those found by researchers of related topics in the literature. Extensive reading of literature in the fields of creativity, social psychology, disasters and entrepreneurship produced a plethora of parallels against which the findings could be compared. Comparisons were made to help to develop theory on significant features of the data, particularly in relation to how those who implemented creative ideas in a post-disaster setting behaved compared to what is understood about those who put creative ideas into practice in a non-disaster setting. In addition, similarities and differences between the characters and their actions in the Christchurch context were compared with those known to act creatively in other post-disaster settings about which research exists.

3.6 Ten Item Personality Inventory (TIPI)

Forty-three of the participants also completed a Ten Item Personality Inventory (TIPI) (See Appendix B) on which they allocated a number between one and seven to indicate how strongly they agreed or disagreed with their possessing specific characteristics (Gosling, Rentfrow, & Swann, 2003). Two participants did not correctly complete a survey. One of the two was C8, who did not complete the survey because I did not have a copy with me at the interview. The participant was emailed a copy to complete and return, but failed to do so. The other, SC23, completed the survey incorrectly so it could not be included. This type of personality inventory is widely used and designed to ascertain the dimensions of the Five-Factor-Model of personality.

The ‘Big Five’ personality factors are openness, neuroticism, conscientiousness, extraversion and agreeableness (Hofmans et al., 2008). The TIPI scale has been tested and found that overall it “retains significant levels of validity” and is “sufficient for research settings with truly limited time

constraints” (Rammstedt & John, 2007, p.203). Renau et al. (2013) concur, stating that “the original TIPI demonstrated sufficient psychometric properties to warrant use as a Five Factor personality measure when the use of longer instruments is not convenient or possible” (p.85). The questionnaire was completed by participants to obtain supplementary data. It was not intended as the primary method of data gathering. The interviews were time consuming, therefore it was decided that it would not have been appropriate to occupy more of each participant’s time by having them complete a more extensive questionnaire. This does not reduce the utility of the data produced. However, the fact that the shortened personality test was completed instead of a longer version means that the value of the results should be viewed as useful indicators of what could be more intensively researched in the future.

Analysis of the data involved calculating the percentages of participants who selected each number from one to seven in relation to each of the ten characteristic combinations. The results were scrutinised, with particular focus paid to relatively small or low percentages and any results that appeared of interest in relation to what had been revealed in the literature.

3.7 Quality and Robustness

The issue of quality assurance is, of course, important. The integrity of this research was dependant on my personal integrity and responsible attitude to remaining true to the data. Doing so determined the findings that accurately reflect the perspectives of the study’s participants. When considering the issue of quality assurance, knowing that the integrity of this research depended on my personal integrity and responsible attitude to remaining true to what the data presented was the determining factor with regards to the production of findings that accurately reflect the perspectives of the study’s participants. Establishing a clear criteria by which to evaluate the data is one way to ensure that academically honest conclusions are drawn (Baxter & Eyles, 1997). For instance, evaluative criteria that permits participant responses that, I, the researcher, consider ‘credible’, ‘dependable’ and ‘transferable’ allows for robust analysis of the data. A criteria that insisted on all participant accounts being ‘valid’ would be limiting and at the expense of robustness, not least due to the absence of a satisfactory form of measurement (Travis, 1999). Further advice with regards to maintaining robustness and integrity was gained from the literature (Tobin & Begley, 2004). In order to ensure this, as well as taking care to accurately record and transcribe data verbatim, I took two additional measures. Firstly, I coded twice. The second intensive coding took place several months after the first to see if I had begun to view things differently or identified anything new or which I had missed in the first coding. I generally found I had not, but some ‘tightening’ - or further consolidation - of themes occurred. This involved decisions to disregard – reluctantly in some cases – information

that initially seemed like it may have been important, or was only mentioned by one or two participants.

Secondly, I did not provide my participants with the opportunity to read and approve the transcripts of their interviews. This was not considered deceptive as at no time were they given the impression that this would occur. One participant, who knew that in some studies participants were given the chance to read and amend their interview comments, questioned why he had not seen the transcription of his interview with me. Personally, doing so would have seemed, at least in the context of this study, a threat to the integrity of the data.

By chance, not long after I had completed the interview stage of the research, this study was randomly selected for an ethics audit. The panel representing the university's Ethics Committee were in agreement that my viewpoint regarding not showing participants' transcripts – that I had been forced to question – was valid. I now view the non-revision of transcripts by participants as a contributor to the robustness of this study's data. I appreciate that there are arguments for providing participants with transcripts to check. It has been known to encourage further or deeper thoughts. However, I believe the need for this should be considered on a study by study basis. The literature supports the choice to not supply transcripts for reconsideration by participants. Forbat and Henderson found that participants were more concerned with how they were represented than the accuracy of the conversation when reading provided transcripts. They found that the procedure "shifts the epistemology" and raises power issues about who is controlling the research process (2005, p.1124). Mero-Jaffe (2011) also recommended caution when deciding whether or not to send transcripts to interviewees. While acknowledging some potential advantages, Mero-Jaffe stated that: "the disadvantages to the research study create doubt as to the value of transferring transcripts to the interviewees in qualitative research. Furthermore, Hagens and colleagues (2009) believe that the disadvantages overcome the advantages of the procedure" (p.243)

The knowledge that I had assured, and of course would honour, anonymity of the interview participants further enhanced the security of this choice. This assurance and my own integrity meant that the participants were not in any danger of being negatively affected by my choice.

3.8 Ethical Considerations

The need for data collected from participants to remain anonymous, confidential and private are the main ethical considerations for this proposed study. Informed consent was sought from interviewees. Each was allocated a code for identification purposes. Each was also made aware that the interview was to be recorded, and that no-one other than the research team (i.e., including supervisors) – although usually just the researcher - would listen to the audio recording.

As some of the prepared interview questions were designed to elicit responses related to the participants' experiences of and after the earthquakes it was expected that some may react emotionally, perhaps unexpectedly. I had to consider ways of dealing with this eventuality should it occur in order to protect the psychological safety of all parties, such as personally consoling or assisting in seeking appropriate professional support. Ultimately no participant required consoling or further support.

Also, when seeking to understand personal influences I ensured that participants were comfortable being asked questions about events in their lives that could be considered personal. This was achieved by 'chatting' before the interview formally began in order to become a little less like strangers. Sometimes the events of the day would be shared or common ground ascertained or other light-hearted discussion before we assumed the positions of interviewer and interviewee. Questions about childhood influences, family and other role models, past work experiences, for example, could have prompted unexpected recollections that – like the earthquakes – could lead to an emotional response. This was not viewed as particularly problematic as each participant knew the aim of the study was to understand personal and contextual influences. There was no intention – or requirement - to 'pry' into any personal details likely to be of a sensitive nature, and questions were designed in a way that they invited the participant to provide whatever information they were comfortable expressing. Participants were also informed they could choose not to answer particular questions. No-one refused to answer a question.

3.9 Background, Beliefs and Biases

With regard to my own motivation, I was drawn to this topic due to a long held interest in the subject of creativity. My interest stems from a desire to understand what leads some to take, often, brave steps towards developing ideas that could bring benefit, while others are deterred. What deters them? Perhaps they need not be deterred. Also, what enables those who successfully activate ideas to maintain and grow their success, particularly in a chaotic environment? Meeting this study's objectives provides insight that could lead to greater understanding of the impact that the post-disaster environment might have had on the implementation of creative ideas, and the requisite support required for ongoing success.

I have always admired those with creative ability, and in particular those who are willing to risk ridicule, rejection and failure to act on their ideas and beliefs for their own, and the common, good. My interest is also fuelled by the fact that I experienced the Christchurch earthquakes first hand. I witnessed the devastation and dismay in the city and the resilience of the local people. I also adapted my own creativity-based business during the period and now watch with interest as the new city develops.

3.10 Setting

Post-disaster Christchurch was selected as a setting for this research as it was perceived as a rich source of data due to the city having experienced various degrees and forms of physical and social devastation. By conducting research within this setting it is hoped that the context will add original insight to existing knowledge about the influences upon creativity. The selected participants, who operate within the environment are likely to have been affected by the post-quake setting. Proximity is also important. It has been an exceptional opportunity to be able to set a study within such a unique setting; the one provided by the earthquakes.

I believe my personal experience in the setting has enhanced my ability to empathise with the participants regarding the challenging physical and social environments they were operating within. Participants' understanding that I shared this experience is likely to have been advantageous. When they spoke of their earthquakes and post-disaster experiences they knew I would be able to recall and relate to the individual events and what had occurred in response. In fact, this type of common bond could be seen as an extension of the community spirit that was more pronounced amongst community members for a number of years after the earthquakes. We were all in it together. However, regardless of this communal bond, I do not believe my ability to remove myself - the non-researcher - and view their individual experiences of creative idea implementation objectively was threatened by the bond of shared experience.

3.11 Summary

In summary, this research is based on accounts of participants; their personal constructions of meaning. Participants were interviewed in order to gain knowledge acquired through their experiences of the Christchurch earthquakes. Gaining an understanding of their subjective experiences, i.e. their accounts of implementing a creative idea in a post-disaster setting, was considered the most effective way to gather data to meet the research objectives. The interview transcripts allowed for analysis and assessment of relative personal experiences in relation to the physical and social settings of post-earthquakes Christchurch. The exploratory nature of the study was intended to unearth the multi-faceted aspects of the social reality, and relationships to it, that existed for the study participants after the earthquakes. The range of participants chosen, and the categories – or domains - they belonged to were outlined, as was the interview procedure and details about administering and assessment of the TIPI survey. How the data were gathered, transcribed, coded and analysed thematically has been explained and justified in relation to quality assurance and robustness. Ethical considerations, which predominantly related to maintaining an awareness of any distress or trauma experienced by participants as a consequence of questioning about actions during a disturbing period in Christchurch's then-recent history, have also been presented. The background

of the researcher has been declared and the post-earthquakes setting as a worthy context of study explained.

The results of this research are presented in the following three chapters. Three chapters are considered necessary due to the richness and nuances of the data. In order to maximise the value of what was extracted from the participants' accounts a full range of responses have been provided. Chapters 4 and 5 provide results that primarily help inform and address research objective one that involved determining the characteristics, influences and motivations of the study participants. The results presented in Chapter 6 relate to what those interviewed believed supported or hindered them while implementing creative ideas in the post-earthquakes setting. These results address objective two as do three new models which are presented in Chapter 7.

Chapter 4

Results Part One: Characteristics

4.1 Introduction

Gaps identified in the creativity and disaster literature need to be addressed by exploring who acts creatively after disaster. Fritz (1996) and Solnit (2009) have comprehensively supported the notion that some of those in disaster-affected communities tend to rise enthusiastically, even happily, to the challenges presented by disaster. It is also known that many opportunities arise for people to implement ideas (Monllor & Murphy, 2017; Klein, 2007) and that the case was no different in Christchurch (Cretney, 2016). How are the creative idea implementers characterised? The results presented in this chapter help to answer this question, while they also address research objective one. As mentioned, a relatively large number of participant quotations are provided. The presentation of characteristics in the transcripts is nuanced. Therefore, the range of quotations is necessary to present as full a picture of the diversity of individual experience as possible. The results of the TIPI survey are presented first followed by results in relation to risk, resilience, challenge-seeking, non-conforming, complementary divergent and convergent thinking, dynamic characteristics, a dislike of rules, working with others, and depression and anxiety. From a wide range of characteristics presented by the 45 participants, coding has revealed these characteristics to be the most commonly mentioned and/or most significant in relation to the literature and known theories, as presented in the Chapter 2, that this data is to be read against.

4.2 Ten Item Personality Inventory (TIPI)

As discussed in Chapter 3, 43 of the 45 participants interviewed completed a ten item personality inventory (TIPI) (Appendix B), on which they allocated a number between one and seven to indicate how strongly they agreed or disagreed with their possessing specific characteristics (Gosling et al., 2003). This has been provided as a quick, quantitative assessment of participants' personality characteristics. The questionnaire was completed to capture supplementary data to assist with addressing objective 1. This type of personality inventory is widely used and designed to efficiently ascertain the dimensions of the Five-Factor-Model of personality. The 'big five' personality factors the inventory is designed to ascertain degrees of are: openness, neuroticism, conscientious, extraversion and agreeableness (Hofmans et al, 2008). Appendix C presents the collated results. Table 4.1 highlights the key findings in relation to each of the categories.

Table 4.1 TIPI – Key Findings

Characteristics	Key Findings
Extraversion, enthusiastic	The data showed that 43.3% agreed a little or less, 27.9% agree moderately and 25.5% agreed strongly that they were extraverted and/or enthusiastic.
Critical, quarrelsome	Only 5 participants (11.6%) agreed moderately that they were critical or quarrelsome and just 2 (4.6%) agreed strongly. The largest proportion, 83.5%, agreed only a little or less that they were critical or quarrelsome.
Dependable, self-disciplined	Just 23.1% agreed a little or less that they were dependable or self-disciplined. A significantly larger portion, 60.4% agreed moderately, while 16.2 % were willing to say they agreed strongly.
Anxious, easily upset	Only 4.6% agreed moderately or strongly (2/43) that they were anxious or easily upset. Both were artists. The largest group disagreed moderately 30.2%, while 13.9 % (6) disagreed strongly.
Open to new experiences	Sixteen participants (37.2%) agreed moderately that they were open to new experiences, whereas 22 (51.1%) agree strongly. Only five out of the 43 who completed the survey agreed a little or less.
Reserved, quiet	Largest percentage (10/43) neither agreed nor disagreed. No respondents strongly agreed they were reserved or quiet. 88.4% (38/43) only agreed a little or less that they were reserved or quiet.
Sympathetic, warm	Nineteen (44.1%) agreed moderately and 9 (20.9%) agreed strongly. Only 1/43 said they disagreed a little or less that they were sympathetic and warm.
Disorganised, careless	A significant 88.5% agreed only a little or less in association with the characteristics of being disorganised and careless.
Calm and emotionally stable	Just 16.2% disagreed a little or less that they were calm and emotionally stable, while only 6% agreed strongly that they were calm and emotionally stable.
Conventional, Uncreative	Nineteen (44.1%) strongly disagreed, thirteen (30.2%) disagreed moderately, which meant a significant 74.1% disagreed moderately or strongly that they were conventional. 3/43 Agreed a little. No-one agreed moderately or strongly.

These results were considered alongside the qualitative data presented in the following sections and discussed in Chapter 7. The findings from the analysis of all data - TIPI results and interview transcripts - will be the basis for a model that provides a systematic account of post-disaster creativity as seen in the Christchurch setting.

4.1 Risk

As discussed in Chapter 2, entrepreneurs, in particular, tend to be comfortable with risk-taking and implementing novel ideas that involve risk. In light of this knowledge, participants acting in a post-disaster setting were questioned to determine their attitude to risk-taking and the possibility of failure in the post-disaster setting. Related data were gathered to compare with the literature regarding risk adversity in non-disaster settings. It was found that some not only did not mind the risks involved but enjoyed, even pursued, risk. One said: *'No, the risks...the risks...that's the fun bit, really'* (C10). And another: *'I don't think it's (beginning a new venture) a risk. I don't think that way. I always think it's interesting'* (C19). One woman interviewed felt like the diverse career path she had taken had prepared her for the risks her current venture involved: *'I don't know why I'm into risk really. I think it's just because I haven't had a massive conservative career, which I thought I should have had, but now I'm really grateful that I didn't'* (SC12). Past experiences influenced in other ways that helped diminish the sense of risk:

I guess we're a bit different from some people. It's only money. We've moved around a lot with my husband's job. We've lived in a few different places and I just think that we perhaps don't put the same value on that sort of thing (a particularly cautious approach to spending money on implementing ideas with unpredictable outcomes) other people do. (C16)

A chef suggested that if you were committed to what you were doing for the greater good there was no risk:

I just think because you really believe in what you're doing, and I believe I'm doing the right thing by supporting the farmers and putting some money into their profits and showing the people what we have, then they get more support. They're producers, honouring the land and respecting the land, so I'm doing the right thing and I don't think there is any risk. (SC14)

Closely associated with tolerance of risk is having a limited a fear of failure. Many of those interviewed claimed to be undeterred by the possibility of failure, with a number claiming it was necessary for success. One claimed to be happy if at least a level of success and enjoyment was achieved, even for a brief time: *'Well my philosophy has always been it's better to start and find out than to not start....I mean what is failure? What is success? I have no care starting something...if it goes on for a little bit that's fine'* (C2).

To others failure was an essential part of the road to success: *'How can you be good at something if you're not willing to be bad at something?' (C13). And: 'You've gotta fail...You've gotta try stuff and fail. No-one does perfect stuff all the time' (C8).*

It was common for participants to see the negative aspects as something they were willing to endure. The right attitude was all important for a fitness group developer: *'I suppose I just trust that if you do the work you'll get there. And I realise that a part of that process is the shit period' (C13).* Another, whose creative idea was also connected to fitness, said: *'The one thing I've learned is that not everything is going to work, but it doesn't mean it is a fail. It's just like figuring out like don't do that again, and how can you make it better, and things like that' (C17).* The participant group provided a rich and varied range of reasons for being willing to take risks. One would rather be seen failing than not trying: *'I'm a trier and if other people say 'It didn't work, she's no good', that doesn't worry me' (A3).* Another understood that it was part of possessing and promoting strong views: *"There's often risks involved... I think you have to be ready to explain and defend your position. Particularly if you take a radical stance' (S39).* One social entrepreneur believed she had no choice but to take the risks involved: *'From a point of naiveté it was a huge thing to undertake, but I knew that was the only way we could do that, so I was willing to take that on' (S27).* A young businessman believed taking risks demonstrated character and provided experience and an education:

It's part of the gamble, part of the risk. I think it's why you go into business at a young age. It's that learning curve. Even if this fails, we've learned so much. We can go to prospective employers 'look we founded a business...limited liability'. I don't know many people my age who look to start up a proper company. Failing shows that you're prepared to give it a crack. (C24)

4.1.2 What Risk?

The data reveal that participants were generally accepting of risk sometimes to the point of not recognising consequences as risks. Risk was widely viewed as a necessary part of the process, as was failure. It was common for participants to state or suggest that the prospect of risk and failure made creative idea implementation more interesting and exciting due to the unpredictable element. Participants talked of past experiences preparing for risk, uncertainty and failure. It is notable that there was little specific mention of the earthquakes in relation to risk. The post-earthquakes setting did not appear to exacerbate or lead to any fear of failure or risk over and beyond that which may be expected in a non-disaster setting. In addition to being comfortable with risk, participants did not perceive themselves to have been destabilised by the unstable physical or social environment.

4.3 Comfortable with discomfort

After the earthquakes the citizens of Christchurch were, seemingly, constantly referred to as resilient (Dionisio & Pawson, 2016; Berno, 2017; Hayward, 2013). This study aims to distinguish creativity from resilience, but due to the prevalence of it being attributed to Christchurch residents, and its known association with creativity (Metzl, 2007; Metzl & Morrell, 2008; Weston & Imas, 2018), identifying the characteristic in participant interview transcripts was considered valuable. Resilience in the form of mental toughness was evident amongst participants. Some talked of persevering with ideas regardless of negative responses. It was commonly found that participants were able to disregard criticism in the process of implementing an idea. This is not to say that it was not noticed or felt: *'Of course you dwell on the negative'* (S4). However, the ability to rationalise and ultimately move forward, despite being aware of adversity, is important to note. One artist who created a prominent public art piece that regularly attracted comments said:

You can get 100 really good compliments, in a sense, and one negative and all I can hear is this one... I think in some ways, sometimes, it's about them. The criticism about them and how they're perceiving. But I also think, well they're free to think what they want. Or feel what they want. (A1)

And a young businesswoman commented: *'There are people who say 'yes' to your face, and then you sort of have to chase them down, but I always think it's their problem, not mine. It's them not me'* (C2). Another claimed she barely noticed criticism: *'Water off a duck's back'* (SC12). Yet another found it empowering, saying it *'drove'* her (S31). Some believed negative responses are an unavoidable part of the road to such engagement. They realise they are unlikely to please or satisfy every individual so do not expect to do so. A publican expressed this idea strongly:

I'm of the opinion that if people don't like it.... if someone hates it, it means someone else loves it. And that's a good thing. It's better than no-one caring about it. And hate you can work with that. And if you've inspired them that much, to be that hateful about it, you're doing something right. (C8)

Another participant, who created furniture with a unique aesthetic, said in response to a negative review of his work: *'I'm not offended. We created an emotion in this guy that he could actually be arsed to write a letter to the editor to explain, and I think that's cool'* (C18).

Some participants talked about being aware of discomfort with adversity as something necessary to overcome to reach their goals. Like risk and failure, it was part of the process and another way in which they needed to be flexible and adapt to achieve the desired outcome: An artist said: *'I'm not a person who loves standing up in front of people, but you just sort of get used to it'* (A3). Another

social entrepreneur, with a fear of public speaking, who had to regularly address a crowd, said: *'And that's why I do these things because I can see that there is a benefit for other people.... I've got to push through my pain'* (S32). She could see the possibility for personal growth, as could another woman who found herself needing to acquire new technical skills quickly: *'It was a lot of work, hard work, but it was amazing. There were a huge number of challenges that I was really eager to overcome'* (C28). Some were helped by having a performance background: *'I guess, again with the Free Theatre, I was never the instigator but we ended up doing some things in public space and in shopping malls.... I got used to being uncomfortable'* (S4). Another appreciated the benefits of being able to 'push through' the discomfort:

I don't like putting myself in those situations, but I'm actually comfortable with them.... It's getting out and experiencing that and finding out how far down you can dig....to push through it. I put myself in those situations, for fun. (C18)

For another participant the difference between her extroverted and introverted tendencies was clear: *'In some ways I'm a leader, and in other ways I'm uncomfortable as a leader'* (S20). One artist expressed the experience of being in the 'middle' of contradictory forces:

I've been looking more into introverts. I am one, but not on a super introverted scale, probably more around the middle. A bit of a conflict for me because I always thought I should put myself more out there. I do by creating stuff that's in the public eye....that's really putting yourself out there. When you open up to other people it can be quite uncomfortable. (A21)

As with accepting risk and the possibility of failure, study participants were aware they may experience discomfort if their idea was criticised. However, enduring uncomfortable situations was viewed as part of the necessary process to creative achievement. While negative responses could be harmful some enjoyed the challenge they presented. Engaging an audience was valuable for participants, especially artists. Therefore, some found joy in negative feedback as it indicated the work was in fact engaging a viewer and making them think. This is interesting given many of those interviewed experienced anxiety and could be quite uncomfortable when attention was focused on them. However, the desire to meet creative goals could be greater than their fear. Many chose to act despite their discomfort as the expected benefits of their venture would be their own reward.

4.4 Challenge required

Acting within an unstable and unpredictable post-earthquakes setting presented challenges. Was this something those who implemented creative ideas in this context relished or sought? In some cases, discomfort seems to have been sought and experienced by participants by choice. Boredom, or fear of boredom, could be one reason for this. Some participants were not satisfied with merely achieving

a goal. A desire to ‘push themselves’ beyond what they had already achieved was apparent. One hospitality proprietor said: *‘We’re not really maintenance kind of people. We kinda want to do the next thing’* (C9). Others spoke of a similar eagerness to continuously move forward and evolve: *‘I think it’s just I love taking a challenge. I’m like ‘What’s next? What’s next?’* (SC11). The enjoyment of a challenge in the form of extreme-sports was mentioned by a technology company entrepreneur: *‘In my personal life I push myself – not as much as many people – but I push myself in events. I’ve done the Coast-to-Coast, I’ve done parachuting and triathlons, motorsports and diving’* (C7). A furniture designer was just one of a group who regularly enjoyed outdoor, sporting or fitness-based challenges, saying: *‘I do mountain biking, bungy jumping....I do love that sort of thing, calculated risk. I’ve got no problem with it’* (C18). Another participant, who works in the fitness industry, found personal growth in taking on challenges outside this sphere:

So last year I put myself in a band, but I was the weak link. I’m not secure and I’m vulnerable....but I love that. Fitness, it’s not that challenging for me and it’s very safe. I can stay in that and be successful....but am I growing? Whereas in the band....I’m vulnerable...I’m growing....I’m weak and insecure, and I love it. (C13)

As with risk-taking and enduring criticism, participants accepted challenge as a necessary part of life. It seems that challenge was not only sought in order to gain the satisfaction of achieving difficult goals, but also because it was considered inherent in any goal for which it was worth striving. When an objective had been met, or a project completed, it was likely that another novel, perhaps more difficult, task would beckon.

4.5 Another normal

A non-conformist is defined as “A person who does not live and think according to accepted customs and standards” (Cambridge University Press, 2019). Cialdini and Trost expressed it another way. They claimed that if conformity is described as a “behavioral change designed to match or imitate the beliefs, expectations, or behaviors of real or imagined others” then non-conformity is its opposite (1998, p.281). The post-earthquakes setting resulted in some accepted ways of doing things being impossible, or at least difficult. Therefore, non-conformity became not only acceptable, but necessary when substitution was, perhaps, the only option (Cameron, Montgomery, Moore & Stewart, 2018). Therefore, those who acted on creative ideas in the setting may have had little choice but to ‘non-conform’. The interview data were interrogated for evidence of non-conformity in order to ascertain if this was a ‘fixed’ character traits of participants. Or, were they willing and/or keen to non-conform regardless of whether they were acting in a post-disaster zone.

An appreciation of things that were quirky rather than conventional was something else that was apparent amongst participants. There are two forms of non-conformity: resisting influence and rebelliousness (Griskevicius, Goldstein, Mortensen, Cialdini, & Kenrick, 2006). Examples from the data do not show overt rebelliousness, but reveal confidence in individual tastes that reject influence without fear of rebuke. One participant appreciated the interest generated by disorder:

You need the scruffy and you need the dysfunctional and you need the eyesores, because if everything's perfect it then starts being soulless and like Disneyland. Good cities have homeless people living in them ... we don't want homelessness but ... and like the prostitutes that used to be up Manchester St. All of that got ironed out ... but ... you don't want to go engineering prostitutes, but my wacky idea is why not put them up by the new police station, where it's light and there'll be security ... and maybe it's silly idea ... but why? (C8)

The conventional was sometimes seen as dull. A publican said:

I'd trade cool for comfort any day of the week because I get more enjoyment out of things being quirky than I do out of them being practical. That's why I drive a Morris Minor that leaks and smells. I don't care about that. I like a Morris Minor better than a new car that never goes wrong. (C10)

Despite the discomfort alternative views and lifestyle choices may bring when associating with those with more traditional views, it seems non-conformists have an acceptance, enjoyment and sense of pride in being part of the 'out crowd'. One actor said: *'To do theatre in Christchurch, New Zealand, let alone Avant Gard theatre you've got to be a bit bonkers' (SC45)*. A musician participant illustrated a lack of conformity with regards to what others typically consider acceptable musical arrangements when stating that he was not interested in playing songs:

I don't like songs, I make noise. I'm highly educated, but at the same time when it comes to music I'm deliberately untutored. It's an activity I engage in as though I am a musician but without respecting the specific discipline and knowledge of the musician. I don't see any point in it, it's just arithmetic. It's stupid. (A36)

There was a distinct sense amongst the majority of those interviewed that they were aware and proud of their uniqueness and the courage to act unconventionally. Although some implied they had suffered for it during their school years, any residual emotions with regard to negativity experienced was not apparent, or, if present, not acknowledged. They spoke confidently of the novel ideas they had championed. However, as discussed, novelty is widely considered only one key aspect of

creativity. In order to make novel ideas valid, many believe they should be useful i.e. solve a problem. Creating utility employs both divergent and convergent thinking skills.

4.6 Thinking inside *and* outside the box

Although creativity tests have predominantly focused on assessing divergent thinking ability, it is also known that convergent thinking plays an important role at the implementation stage of a creative venture (Cropley, 2006; Runco & Acar, 2012). “Divergent thinking is a thought process used to generate diverse and numerous ideas on some mental task, implying that not only one solution may be correct” (Razumnikova, 2012, p.1). Whereas:

Convergent thinking involves combining or joining different ideas together based on elements these ideas have in common. In short, convergent thinking means putting the different pieces of a topic back together in some organized, structured and understandable fashion. (University of Washington, n.d., p.1)

Could participants with the characteristic of possessing both divergent *and* convergent thinking skills be identified in the data of this post-disaster research? Some participants demonstrated this personal attribute through claiming to only implement an idea after careful consideration of all possible outcomes. Some claimed this allowed them to speculate about, and mentally prepare, possible contingencies. This resulted in the perception of less risk, which led to confidence and a greater willingness to act:

We treated it like a business from day one... it had to be a sustainable business. It wasn't something that we were going to treat as a disaster project and constantly rely on us having our hands out. It's got to be strong. A lot of people are going to rely on it. You can act 'outside the box'. I think thinking outside the box is great, but actually it's about results at the end of the day. (C7)

It was predominantly the commercial entrepreneurs who shared this attitude. The enjoyment that came from being creative and seeing an idea reach fruition was not enough:

I think my creativity is more harnessed towards being entrepreneurial. Having an idea that is going to work and make a successful business. Not that makes heaps of money but makes enough money to keep it going. Not just looking around for what could be a good business idea, but looking around for something that I'm passionate about that would make a good business idea. Personally, it's got to be commercially successful and it's got to be different. (C10)

Another participant, a furniture creator and businessman, concurred: *'My mind's always going with an idea, but here's the big kicker – you can be creative but unless you work on the impulse, see that come true, it's just an idea'* (C18). A mobile chef believed careful planning was the way to offset risk: *'I usually think a lot before I start doing something. I research a lot. I'm used to doing that kind of thing. I think, naturally, I'll do a plan before I start new stuff'* (C19).

It was common for, particularly, the commercial entrepreneurs to discuss the careful consideration given to implementing their novel ideas. Novelty alone was not enough, the idea had to be analysed in terms of its business potential. Although there were other participants who demonstrated convergent thinking ability, not all applied it to determining the likely financial success of their venture. It seems that despite most participants being comfortable with risk, the commercial entrepreneurs were more intent on minimising the likelihood of failure.

4.7 Dynamism

Dynamic qualities like self-efficacy have been associated with creative idea implementers (Merriotsy, 2013; Feist, 2010). Regardless of whether participants considered themselves extroverts, many were energetic when discussing their creative ideas and motivations. They generally appeared positive, optimistic and enthusiastic while talking about the implementation of ideas, despite having operated in a disaster-affected setting. This reflects Fritz (1996) and others who found that positive, dynamic energy tends to spur those who act to support their community after disaster. As one participant put it: *'I also write a personal blog and am aware that I might come across to some people as an over achiever....not an over achiever, but energetic'* (SC11). Another participant demonstrated this positive attitude in saying: *'It's about looking for reasons to be optimistic, not looking for reasons why it's going to fail'* (C10). One participant was able to see the opportunity that arose when having to move out of his house, so earthquake repair work could take place: *'I had some friends who were complaining but I looked at it as an opportunity to declutter'* (C18). Others spoke of a history of being highly-energetic: *'I think I've always been a real high-energy person. As a kid I was really full-on'* (C13). And: *'I've always had that sort of all or nothing personality, so I was always sinking it in ...who could party the hardest, who could do the most ridiculous things'* (C17).

Although not all participants were overtly gregarious, and a few were of a quieter disposition, none could be described as reserved during the interview. All were confident, articulate speakers and friendly to at least some degree.

4.8 In control

Another dynamic feature of the way participants tended to act that was frequently expressed in the data was the need to control others. A desire to feel in control leads to frustration for some,

especially if others are not meeting their standards or expectations. With reference to staff, one participant described how:

I think they won't do it right..... I am a bit of a control freak. I started off being sole owner...but then I put a structure in place...pyramid style, where you had sort of middle management. And that was sort of handing responsibility on and that was a challenge for me. It's frustrating because you can see the potential there but potentially the person's not doing what they need to be doing. And that's what I find frustrating. Maybe I do set my levels too high, but I do get frustrated at people not achieving what I think they should achieve. (C15)

A young fitness instructor seemed amused by this controlling aspect of her personality: *'I've become quite a control freak... and enjoy the satisfaction of seeing something come together the way that I've pictured it'* (C17). Particularly in connection with the post-disaster setting, some expressed frustration with volunteers who, although well-meaning and generally appreciated, could be difficult to organise, upskill and 'quality control' (A1, A21, A33, S27, S39). One sculptor linked the joy of making to a sense of being in control. Having to allow others to be involved in a joint creation sometimes jeopardised that enjoyment for him:

I guess I'm a bit of a control freak. I like to have control over what I do. That's why I like to design and build stuff, because there's complete control.... I find it quite hard letting go. One of the challenges for me was to let other people do stuff when they couldn't do something properly. (A21)

The poorly-considered actions of others led to disdain and annoyance for one social entrepreneur: *'I see things that were being done poorly and I'd get fucked off and think 'I could do that better' and elbow my way in' (S4).*

It appears that those who are willing to drive the implementation of a creative idea like to have control over the outcome or output. Those who responded to questions by suggesting a sense of control was important gained most enjoyment and satisfaction when they could see an idea through to a form that matched their vision. Interference by, or involvement of others, particularly if they considered the assistance substandard, diminished the overall experience for the participant.

4.9 No rules please

As discussed in Chapter 2, the literature reveals disasters tend to lead to instability that results in a relaxation of rules and rule enforcement. The data show that the people involved in this study tended to dislike rules.

One participant had strong views on the topic:

I hate asking people for permission.... for anything, to go on holiday....and like if your boss doesn't see you sitting at your desk for eight hours a day...or it means you're not working. Well guess what, I'm not working because you don't have any work for me. I don't like that way of working.... it's not the future... 'Don't tell me what to do'...when it doesn't make sense. (C2)

Another realised he was against being regulated from an early age: *'I didn't like school, because I don't like rules'* (C7). This disregard for rules was apparent in participant comments that showed a blasé attitude to authority, which was likely to interfere with or thwart plans: *'I think in the new year we'll go public and not worry about CERA and see how we go. I haven't dealt with the Council for anything about my art. We just did it, I quite like that'* (A1). Another participant who established an alternative retail premises in a unique space said that she did not approach the City Council. She wanted to avoid encountering any difficulties or extra costs, so just did not ask for permission (C5). Others also made a conscious choice not to involve entities that could enforce restrictions or create issues: *'We've managed to avoid them the entire time. When I started my business, I decided not to let them (CERA) in'* (SC12). An entrepreneur said:

I never told them. I never asked permission. As my wife says it's easier to get forgiveness than permission. Yep. If there's a sign saying don't go there, I'll go there. I mean I don't break the law, but I'll push the boundaries. (C18)

When a restaurateur was asked about whether any council consents were required to act on his novel ideas, he said: *'There probably would be if I looked into it, but I just don't deal with them and I don't interact with them, because I think they will try and block things'* (SC14).

Participants who demonstrated a dislike of rules presented as having a 'healthy disrespect' for rules, particularly those that seemed arbitrary or trivial. Some spoke of having this attitude since childhood. Some had experienced difficulties when trying to do 'the right thing' but had learned from experience it was sometimes better to commence and answer questions later. Others speculated that regulatory bodies would interfere needlessly and prevent the implementation of their project. Although, there may have been some arrogance driving decisions to avoid seeking permission, there was also an awareness that those in authority had larger issues to remedy and may not know how to respond in such unusual circumstances.

4.10 Better with others

Despite participants enjoying a sense of control, most of those interviewed said they preferred to work with another person or as part of a team. This aspect of participants' characters was explored

to compare with what is known about whether or not working alone to implement an idea is preferred in a non-disaster setting. One participant went so far as to claim he would not want to work alone: *'Personally, I just don't operate that way. I do almost nothing on my own' (S4)*. Another participant, a social entrepreneur, provided insightful comment that revealed several benefits of working with others as she saw them:

When I'm with, say, two other people and my mind is going 'ping, ping, and ping'. I will have some creative ideas of my own, absolutely...whether I have the confidence to follow them through or not.... I'm a potterer. I might have a nugget of an idea, but there's no way I wouldn't ping it around with people because I'm a firm believer that any idea is far, far better if you rattle it around the chambers of people's brains. It's much more interesting that way. (S20)

While some lamented not having more direct support, especially at the managerial and organisational level, many more expressed how valuable the direct support they received from others was, be it volunteers, friends and family or other team members .

4.11 Out of the depths

Depression and anxiety is regularly associated to with creative individuals, particularly artist who express themselves through their artworks (Feist, 2018; Delgado & Bogousslavsky, 2018). It has already been noted that a post-disaster setting can prompt a positive energy amongst community members that can lead to creativity, but were the participants of this study affected by a history of negative emotions, such as anxiety or depression? A range of participants mentioned being able to overcome the adversity and doubt that stand in the way of achievements. They believed creating helped them express and purge negative emotions:

It wasn't until I was 40 that I went back to art, and what finally brought it on is that is I find it very therapeutic. I think struggling with really terrible depression the art helped. I could use it to communicate when I couldn't communicate in other ways. (A1)

Another recognised her ailment and had learned that it had to be accommodated into her life, as there was little point in fighting against it: *'I suffer quite badly from depression. If I'm fully depressed I'm like there's no point in anything whatsoever today. Anything you do is going to be substandard, so I'll give two days to wallow' (SC22)*.

One seasoned commercial entrepreneur has always had a penchant for challenging situations, despite knowing it can overcome him emotionally:

I always bite off more than I can chew. I could barely cope with it all. I was on pills and seeing a psychiatrist. I gave myself a real hiding but I managed to pull it together. I go back and I saw a shrink and he told me to think about why I get myself into these stressful situations. Thirty years ago I wanted to buy a yacht in Europe and sail it back with the kids on board, because I'd come through the Suez Canal when I was eight and I wanted to give the kids the same thing. Half way through that trip I was in the same nervous state, I just wondered why I did it. (C30)

One participant, who established a community collective, considered herself isolated in her anxiety and resents not being reassured as a younger person. She thinks that if she had been made aware that her anxiety was 'normal' it would have led to greater achievements and experiences:

I was always very scared and nervous in front of people. And that was why I gave up. I didn't have a mentor to say 'actually it's normal to be terrified'. And that's why I gave up. It's normal to want to faint and nearly throw up before you go on. (S32)

For some, the tension specifically arose from having to take a leadership role, which, while desired, also caused anxiety and self-doubt:

It hurt at the time and I always felt like every decision I was makingwas I being selfish? Did I not do that right? Was that a completely awful style of leadership? And then I realised that 'no'...and my friend sent me this quote that 'A tiger doesn't lose sleep over the opinions of sheep'....not that people are sheep or anything, but I realised that we're all in this together and we're all wanting to make a positive difference. (S29)

Revealing a creation to others can also be a source of anxiety and doubt. Once it has been seen, it cannot be unseen: *'I'm reasonably confident with it now, but you have to think that when you put in a public art work... you can do a lot to it before it goes in. After it's gone in you can't touch it' (A37).*

A wide range of emotional difficulties was discussed by participants. Those who discussed these difficulties were forthcoming and unashamed of this aspect of their personalities. Overall, when discussing experiences of anxiety and depression, participants did so straightforwardly without hesitation. Participants tended to make each situation seem as if it was merely another hurdle to overcome as their creativity was a compulsion rather than a choice.

4.12 Summary

The key themes in these findings are the prevalence of both dynamic and sensitive qualities demonstrated by participants. Many expressed comfort - even enjoyment - of risk, provided evidence of resilience, appreciation for a challenge and a willingness to non-conform within

conventional society. It follows that those with these characteristics would experience adversity. A large proportion also suffered from anxiety, depression, self-doubt or other emotional discomfort. It is in this sense that there is clearly tension between participants' dynamic and sensitive characteristics. This seems interesting given how they acted after and during what was experienced as a continuous natural disaster in Christchurch. The results of the TIPI survey show that respondents show high levels of openness to experience. Few thought themselves conventional or uncreative. Other findings of significance are the large proportion of participants who agreed to being either moderately or strongly sympathetic, and that less than half of those surveyed believed they had higher than moderate levels of extraversion. Interestingly, levels of anxiety were low, alongside relatively low levels of calmness. Also, only a small number of participants thought they were critical or quarrelsome. In light of previous research, the findings in relation to openness to experience and conventionality are unsurprising, whereas the other findings mentioned create interest. Overall, this chapter has provided a complex picture of who these participants are. The next chapter presents further results to address research objective one, but also helps to answer the question why did they choose to act as they did, implementing creative ideas, after the earthquakes?

Chapter 5

Results Part Two: Influences and Motivations

5.1 Introduction

It is thought that people act for a reason. Creativity has been closely linked to intrinsic motivation by a range of researchers (Hennessey & Amabile, 1998; Ryan & Deci, 2000; Prabhu, Sutton & Sauser; 2008) and to a lesser extent extrinsic motivation (Eisenberger & Cameron, 1996; Cameron & Pierce, 2004). It is also known that creativity can be influenced by those known to the creator, be it in a work environment (Shalley & Zhou, 2003) or in a social (Perry-Smith & Mannucci, 2015) or family (Isen, 1999; Madjar, Oldham & Pratt, 2002) setting. So, for what motives did those interviewed for this study act? The results presented in this chapter, in addition to those in Chapter 4, were gathered to contribute to addressing research objective one. Similarly to Chapter 4, the number of participant quotes exceeds a single representation of each finding worthy of inclusion. The reasons people behave as they do are individually cultivated over a lifetime and, therefore, unavoidably nuanced.

Results presented include those relating to various aspects of parental and educational influences, in addition to what participants discussed in relation to employers or mentors. An extensive presentation of results that overview the various motivations of those interviewed concludes the chapter.

5.2 Influences in the home

Participants provided accounts of being influenced by their parents during their formative years. General support, support for creativity, role modelling creativity and spontaneity, parental values, entrepreneurial spirit, mothers in support roles – even boring parents - were all considered influential by a range of participants.

5.2.1 Supportive Upbringing

The majority of participants said they grew up in a supportive, two parent family. As discussed in this chapter, parents – in particular – were identified as being influential for specific reasons, but the general lack of complaint regarding childhood experiences seems significant in itself.

Participants' comments that demonstrate parental support include: *'My parents were really supportive. I had great parents' (A21)* and *'I've been mentored by my parents who are endlessly supportive' (SC23)*.

and:

They're amazing. But we weren't spoiled as kids at all. We had a really lovely upbringing. We didn't have heaps of money, but we had enough so we could have a good life...we were very lucky. I don't remember my parents saying 'you can be anything you want'...it was all 'have faith in yourself' and 'try, try, try'... that was the message my mum gave me, but not pushy.
(C28)

However, a small number of this study's participants did experience difficulties during childhood. One participant reflected on how violence and alcohol affected their upbringing: *'My mum and dad...they had their problems. My dad was an alcoholic and a violent alchie'* (C13). Another, raised by grandparents, experienced the effects of poverty:

So they ended up in a state house in Shirley, which is where I grew up. They had six children and one of their daughters gave birth to me so I was.....probably the 8th....because they also fostered one...when I grew up there were 8 kids and two adults in a three bedroom state house.
(SC22)

One man interviewed told of a unique difficulty that resulted in isolation and dislocation:

I think with my mum and dad going deaf ... that was pretty unusual, my father worse than my mother, but I entertained myself really, because my mum and dad, especially my dad became a bit of a recluse. (A1)

However, most participants said that they felt loved and supported, even those who experienced difficulties:

The thing with my parents is, like they were 19 when they had me....hard upbringing. My dad was bought up with violence and alcoholism. But the thing is....I always knew I was loved. So as much as there were definitely faults with the way I was bought up that foundation of love was always there. (C13)

5.2.2 Freedom and support for creative play

It was common for participants to talk of being allowed to play freely, with spontaneity and imagination. One spoke of an unconventional upbringing, where freedom and challenge were encouraged: *'I had a very carefree upbringing. I was bought up in a commune...essentially eight family houses with no fences between them'* (C8).

Recalling the experience of a less free child led to another participant appreciating his own lack of restrictions:

There was a flat patch above the bush and we'd all go up and make huts. I remember one time we made this mud slide and the boy next door, his parents made him run round in his underpants for getting dirty. I thought that was cruel...my parents would never do that. I had a free childhood. (A21)

Another participant, whose creativity was strongly linked with the natural environment said:

With regards to the connection with the environment, we were sort of free range and out and playing within the environment. Just three, myself and two brothers.....I'm in the middle, and very close in age. We used to play together, but often I was left....the boys would go off (laughs) so often I was engaged in playing with natural resources....So childhood I think influenced me, I think, to have a creative confidence, at the very least. (SC27)

5.2.3 Spontaneous and creativity enabling

Those interviewed talked of parents who were actively creative themselves and/or enabled their children's creativity. One older artist said: *'My father was very supportive, he did a lot of sculpturing and painting...I used to go to art classes on Saturdays from 12 through to my early teens. And we had a lot of art books'* (A1). A Māori participant valued the traditional cultural skills his father possessed and passed on: *'I think I inherited the talent from my dad. He was a really good drawer and ended up being a carver as well'* (A35). A gallery owner, shared her childhood memories of creativity enablement: *'My parents used to buy me paints...I can remember drawing on the bedroom floor when I was sort of 7, 8...you know, lying on my tummy'* (AC3). One social entrepreneur recollected her mother's enabling and encouraging creative experimentation:

I'm sure I was influenced by my childhood. I grew up on a farm. My parents...we were pretty poor...they weren't hippies or anything in the seventies they were just really self-sufficient. Mum just really believed that creativity was really important so there was always a creative table for us kids, so we were just always encouraged to paint or draw or just whatever. (S27)

Some participants joyfully reported stories of their parents' spontaneous support for novel ideas and activities. One artist's account was especially heart-warming:

I know my dad was always saying 'this is great', and getting that positive feedback from my father at an early age was actually really important to me. He was quite spontaneous, always did a lot of crazy stuff. One of the things was we had a family bach over at Punakaiki, over on the west coast. Back in 1969 I think...sometimes on Friday afternoons we'd come up the hill from Sumner and Dad would be there and the car would be loaded up ready to go.... [Other times] we'd sit down with a big roll of newsprint. Put a big sheet over the table and just start

drawing on it, the whole family...drawing pictures...Yeah, we'd all sit round, but Dad would be the one to instigate it so...'let's do some drawing. (A21)

A participant who immigrated to New Zealand said: *'I was affected by my dad...all the hobbies. He used to learn English. He used to play guitar, and I kind of followed him....I studied English. I started playing guitar' (C19).*

Support for creativity can come in the form of the acceptance, even promotion, of difference. Some participants spoke appreciatively of having parents, or wider family members, with more liberal views. The participant who was raised in a suburban commune said: *'There was a whole lot of....I wouldn't say lack of rules, but certainly the ability to question the rules' (C8).*

Having parents who did not follow a more commonly socially acceptable path appeared to have validated the sense of rightness in challenging and not accepting the status quo. It seems to have normalised the extraordinary, to the extent that 'normal' was unusual:

There's nobody in my family, or in any direction that I could see, that had a 9-5 office job. My mom was an entrepreneur, she founded a cooking school which celebrates its fortieth anniversary next year. My dad was an actor, so I grew up with a total disrespect for authority. (S26)

An innovative business person spoke of his mother's ability to exercise her creative, unique character in a more overtly patriarchal era until challenging goals were achieved: *'My mother was part of the sort of bohemian art set in the 50s. Did painting and theatre and all that sort of stuff... my mum was bat shit crazy... in a lovely way' (A43).* It can be seen that parents' creative behaviour was both ingrained in the memory of participants, and validated as a reasonable choice, perhaps something to be modelled.

5.2.4 Social and community values

Many participants referred to the influence their parents' social values and sense of community, both locally and globally, had on them. A chef, said he learned that his actions and those of his siblings impacted on others. To understand these impacts was part of the family culture and expected: *'We've all kind of been raised to be socially minded in what we do' (SC14).*

Another talked of how difficult it would be to operate unethically and still feel comfortable in his family: *'The family keeps you honest. There's nothing like a family for reminding you if you're just chasing a dollar, the dirty dollar. My parents are very into ethics and doing the right thing' (C8).* For one woman the idea of service was paramount and entrenched from a young age:

I was brought up with a sense of community, like looking after people and of service. My whole family...they've always served the community...I think there was just a general sense of offering yourself to help other people. (S32)

A public art facilitator credited the influence of his father for being the sort of person who wanted to create and, more importantly, contribute to society: *'My father was a local government officer, so he had a sense of public service, which I think is relevant'* (S39). Participants talked with pride about their parents' involvements in social causes and community roles.

5.2.5 Entrepreneurial Spirit

Many of the creative ideas put into practice by participants in this study were in the form of entrepreneurial ventures. Some of those interviewed felt the entrepreneurial tendencies of a parent had been passed on. One young woman who was involved in establishing both a social enterprise and a commercial one, spoke with pride of a parent who had initiated ventures that had become widely known:

My dad was always very entrepreneurial. He has a camera shop, [names a well-known local camera shop]. He started that when the photo industry was just booming.....when Kodak was the Apple of the world. I think I probably get that from him. (S31)

Another relatively young, but already experienced, entrepreneur, talked about his father who became world-renowned for something he had created:

Dad made surfboards. He's a bit of a well-known name now. [Surname] surfboards was his thing and most surfers around New Zealand know about the brand. They're pretty much collectables these days. He made them out of a shed in Redcliffs. (C15)

There was also a sense that some participants were the children of renegade stock: *'My Dad's pretty much an entrepreneur.....small businessman, very small and fringe, never been mainstream'* (SC12).

5.2.6 Mothers in support roles

Despite much reporting of busy and active parents, it is noticeable that very few mentioned mothers who founded their own businesses, ventures or significant creative projects. Aside from SC26's mother, who established a cooking school, no others were mentioned in relation to leading personally-driven projects. While many spoke with admiration for mothers who were teachers, writers, artists, craftswomen and involved in other honourable professions, it was noticeable how often mothers were mentioned as playing supporting roles to the male parent. Comments like *'Good solid mother'* (C30) and *'She's always been the support person for his ideas'* (SC12) capture the

essence of a seemingly widely-experienced sentiment. However, some participants talked of their mothers being involved in the family business (C2, SC11, C15, C18).

5.2.7 'Boring' parents

Some participants mentioned being influenced by parents who they believed lived uncreative or uninteresting lives: *'Perhaps my father made me think I don't want to be like that. I don't want to be a normal person'* (C30). And:

Fear of being boring. I think it comes from....and no disrespect to my parents, but I think it comes from how you're brought up. I mean my parents worked so hard they didn't have many hobbies.just always stayed home and didn't want to invite people over. (S20)

In summary, these results provide evidence that the vast majority of participants were raised in loving families and experienced not just general and satisfactory financial support, but also support for their creativity and creative exploits. In addition, some had parents that imparted strong community values that were appreciated and echoed by their child. However, it was not only those whose parents demonstrated a strong social conscience who were genuinely invested in bringing benefits to their wider community. Similarly, those with creative parents appreciated and emulated that, but others with 'boring' or less creative parents did also. Freedom and spontaneity were notable qualities identified and appreciated by participants. Entrepreneurial values and associated goals of self-sufficiency inspired some. Interestingly, with few exceptions, the entrepreneurial parental figure was the father. It was notable that a significant number of participants talked of their mothers having a supporting role in the family business or household. While it was common for those interviewed to speak highly of a much-valued mother's support and contribution to the family, few spoke of having a dynamic mother who strove for independent goals.

In addition to family influences, participants also spoke of influential aspects of their education.

5.3 Educational Influences

Comments drawn in relation to influential aspects of participants' schooling indicate that validation of personal creativity or uniqueness is influential. Both negative and positive educational influences were identified by study participants. However, a number of other factors in relation to the education of those interviewed must also be noted. Firstly, the majority (33 of the 45 in the sample) had, at least, *attended* a tertiary institution, with most graduating with the minimum of a Bachelor's degree. Participants' comments in response to questions about their educational experiences almost entirely related to secondary schooling. Almost half of the interviewees claimed to have felt uncomfortable during, or to have extremely disliked, their secondary school experience. Ten

participants thoroughly enjoyed or 'loved' school; two men and eight women. Each of those who 'loved' school attended a high decile or private school, of which all except one was single-sexed. Perhaps not of immediate relevance, but potentially interesting for future studies, three of these eight women were one of a set of twin girls. Sharing their schooling experience with their twin was a supportive factor for each.

5.3.1 Passionate and authentic teachers

It was common for participants – particularly those who did not generally enjoy their secondary school experience overall – to comment on teachers who had a positive influence on them. In some cases it was because they viewed the teacher as inspirational, often due to their passion and enthusiasm for their subject:

There were two or three teachers who were really inspirational... I had a very passionate teacher....I can remember him now, he was a zoology teacher and he would throw himself on the table. His method of telling how the ear works, you know the inner ear and all the follicles he was really energetic. (AC3)

When participants were asked to elaborate on why they had responded favourably to certain teachers, not being patronised was commonly mentioned. They enjoyed being encouraged to think critically:

My most influential teachers were my RE teachers, which is religious education which is compulsory in the UK. We'd have debates and we'd have discussions that involved being critical and thinking, rather than just saying 'this is a fact'. It was actually encouraging us to think. (SC14)

There was regular mention of teachers who treated their students like adults:

I think she treated us like we were budding adults... taught critical thinking and that things are not always what they seem and things can be constructed. I can remember back when you're 14 or 15 and you look at a photo, and that assumption that photo equals truth...and I still remember that class and her saying 'Who got them to stand there like that?'. 'What are they wearing and why are they wearing that?' and I was like 'Oh, wow!'. (S20)

Similarly: *The teachers I remember the most are the ones who just talked to us like normal human beings and not talk down to us' (S26). And: 'They ... talked to me like I was an adult and they asked me my opinion on so many different things' (A33).*

Others found escape and acceptance of their creativity via a teacher who demonstrated an understanding and appreciation of the artistic and exotic. A participant who has spent much of his life as a successful, internationally-recognised sculptor said:

I really enjoyed the art department and I also had a really good teacher there. This really, for me, was somewhere where I could not get into trouble for being creative....I painted April Fool on the school assembly hall roof....after being involved in the art room I was involved in stage sets and things like that, but also really I think he was just a nice man, because it was very much a boys' school and it was very sporty.....but he also painted a picture of somebody from the point of view that he was quite exotic. He used to go off to the Pacific Islands during the school holidays with older lots of ladies and take them on art groups....it was a little bit Gauguinish...but he was also painting. Instead of telling you how to paint, you could see that he was an artist and that's really what you need at that stage. (A37)

A poet recounted his appreciation of teachers who 'did'; those who were practised what they were passionate: 'I had a few teachers who obviously recognised something and were good to me...these were the English teachers mainly... radical teachers who 'did'' (A42). A young artist who put her artistry to community use after the earthquakes appreciated her creative teachers in a sports-focused school:

I went to a boarding school and being a creative person in such a sporty school I was definitely out on the fringes. But the music teacher....I didn't do music, but the music teacher and my art teacher....They really kind of treated me and believed in me, so they were really influential to me. (A33)

Another participant found similar solace:

The creative side was squashed at [school name], but there was one positive in that [well-known artist] was my art teacher and he saved me, because he was originally from Scotland and he had a great sense of humour. And I think, from somewhere, deep down, somewhere in my memory, I remember him having a rapport and understanding of what it might be like for me. (A41)

Most of these experiences took place long ago, yet participants generally appeared to have little difficulty recalling them. This further confirms the importance and potential influence of the response of others, particularly during formative years.

5.3.2 Creativity and difference: a target for bullying and discomfort

Some participants had less success in encountering sympathetic teachers that provided the validation they needed. Instead they found they were influenced by the prevailing bullying culture or behaviour. One artist struggled at the traditional, private boys' school he attended:

I went to a private school that I really hated.....really hated.....It was pretty bad. It was an elitist, snobby school that had no interest in the creative arts....They didn't have an art department there. It was absolutely hopeless.....It was harmful, absolutely. Just a real bullying culture. (A21)

This is also reflected in data obtained from another participant. His strong penchant and talent for creative writing in a sports-dominated school led to discomfort:

I went straight into [school name] that had eight third forms, I think, all strictly hierarchal with 3A1 being the kids who were brightest....and I was plum in the middle, 3B2. I just felt lost in those numbers. I felt threatened because there was a lot of insipient violence...from the staff and the students and I felt labelled. (A42)

As previously mentioned, those who professed to thoroughly enjoy their school experience predominantly attended traditional, well-regarded single-sex schools. However, one woman conceded that attending a school of this type, where academic and sporting achievement is most highly regarded and rewarded, negatively affected her creativity:

I ended up being head girl. So I was a really girly swot. Really enthusiastic and really into the culture of it.....but I think it probably curbed a lot of my creativity... When you went to [name of school] everyone became a doctor, lawyer....everyone went to university...You wouldn't ever think of doing something different, or for yourself....you'd just follow the crowd. (SC12)

It appears that creativity may be influenced regardless of social or academic standing at school.

5.3.3 Disrespected teachers

Some participants indicated that educators influenced them by demonstrating how *not* to be, as with parents. One innovative business owner valued little that he learned while at university:

I thought the lecturers...excuse me for being a bit blunt....but I thought they were stuck in their own ways. I thought they were living in their own world out there. I'll drop some names [ex lecturer]. He needed to go. He was the biggest sexist pig I've ever met. I still look at it...I'm a bit critical of education to be honest out of the ten folders I got out of [names University] I

probably used about ten pages of one folder. When I got into the actual game of practical landscape design in an office...you basically relearned everything. (C15)

Overall, it seems that participant responses reflect how significant it was for them to be acknowledged by educators as individuals with valuable qualities. There was appreciation for teachers who showed passion for their subject and engaged them in interesting lessons that developed critical thinking ability. Conventional approaches and traditional school cultures were not environments considered conducive to uniqueness or creativity, particularly for males. Therefore, some suffered within such environments and extremely disliked school. Responses tended to indicate awareness about why this occurred - i.e., it was typical of the era. Most appeared reconciled to and perceived themselves as not ultimately affected by the experiences.

5.4 Employers and mentors

There were also participants who spoke of being influenced by employers who did things differently and provided opportunities for greater responsibility that led to learning. One interviewee, who set up his own unique hospitality business, said:

I picked up a PR marketing job for [developer] who set up [hospitality complex] and that's where the creativity came from. He sort of nurtured that and I ended up project managing and doing all sorts of stuff with him. (C8)

A chef was influenced by an experimental employer who had inspired him and exposed him to new possibilities: *'I'd just come back from living in Napier. I was working in a really influential restaurant up there. A guy called [name] was combining Māori cuisine with French and Japanese' (SC14).* An artist explained that the freedom to do as he wished allowed him to develop and expand his skills: *'I just started working for a project for a film maker in Pigeon Bay, and he was really open to creativity and new ideas and she gave me free reign' (A21).*

Other participants were energised by people with similar goals and interests. They felt influenced by the efforts and enthusiasm of likeminded individuals whose ideas resonated and inspired action. One participant, who implemented a creative idea within a government department, said two inspirational women leaders created a work environment that allowed fresh ideas to develop. They influenced her by allowing her to open her mind to new possibilities regarding what might be possible in a previously traditional and staid environment: *'They were 'Yes' people. 'Ideas' people. A lot of energy and creativity...They could also could see a big picture and a big environment and that was a really exciting work environment' (SC23).*

A participant who formed a unique charity spoke of what inspired her: *'Surrounding yourself with those likeminded people, but also with people who are ahead of you as well. And being like 'Wow, man that's some deep thinking' (S29).*

As can be seen, participants were influenced by the interests and values of those in their families, as well as educational experiences and those in the wider world. Influences are considered important as they can lead to a chosen direction. However, influences do not lead directly to action, but motivation does (Keller, 2019). The following section presents results in relation to what participants believe motivated them to act as they did after the earthquakes. Both intrinsic and extrinsic motives appeared to be involved.

5.5 Motivation

Firstly, the study participants' motivations that can be considered intrinsic will be outlined, before extrinsic motives are discussed. Ryan and Deci distinguish the two forms as intrinsic motivation referring to something "inherently interesting or enjoyable" and extrinsic motivation as "leading to a separable outcome" (2000, p.55). The following sections present results that indicate participants were motivated by both forms.

5.5.1 Intrinsic motives

The data revealed two key intrinsic motives driving creative idea implementers in this study, specifically the joy of making something that can lead to *flow* and compulsion.

Joy of Making and 'flow'

One participant found reward in the joy experienced while confidently using his skills:

I've got drawing and I've got design skills. I can think and I can visualise. I can design something and I can create it as well. That's quite unique. I love that. For me, designing and building something is absolutely what I love doing.....Very rewarding. You're not creating someone else's vision you're doing your own. And it's that working through a process.... Thinking through those ideas... there's a lot that goes on and trying to nut it out. Making models, and ultimately, if you're clever and it works it's very rewarding. (A21)

A creator of a magazine with unique content also said her drive was to produce what she had visualised: *'I wanted to make a magazine. That was the drive' (SC11)*. A street artist felt compelled to create to improve on the destruction left by the earthquakes: *'I just painted a whole lot of walls just for the love of it...and needing to paint them' (A34)*. When a sound artist was asked what motivated him he said: *'Doing it....the process and the production' (A43)*. A poet spoke about the joy he found in the creation process:

Making something. I always go back to the Greek derivation of poetry, which is 'poesis' which means something made, and to me a poem is an artefact. So I try and bring all the elements of the artefact together to make the most perfect artefact I can of its type and that will get predicated by its mood, by what it wants to say and how I want to say it...it's tautological perhaps a poem is a work of art. I'm not a confessional poet. I don't want to pour out stuff. My reward is seeing it. Like a potter. Just as a potter spends hours making a pot on a wheel and knows instantly if something works and something doesn't and knows instantly when the perfect pot emerges. (A42)

The way participants talked of the joy they felt when creating or producing something seems linked to a key aspect of Csikszentmihalyi's (1996) Systems Model of Creativity – as discussed in Chapter Two - in that it is likely they reached a state of *flow*. This full immersion in creating, to the extent that all stressors can be ignored, allows for the task itself to motivate a person to a desirable result.

Compulsion

Others spoke of feeling compelled to act on their ideas:

I didn't feel like I had a choice in the end. I don't want to end my life knowing that I chose to ignore the calling that I got called into. Like I don't actually feel like I've had much choice... it has been outside of my decision making...all the way. (SC22)

Another participant also felt like it was something you feel must be done: 'So really the drive is, I'd describe it as an itch you scratch each morning...that you feel each morning, and you have to do something during that day' (A37). Another participant, a sculptor, expressed a similar drive: 'I just have a driving need to make artwork. Always have. There's never been anything else. I think it's just something inherent in someone that needs to make things' (A38).

Although the intrinsic motives identified in the data can be categorised into just two forms they can be associated with much of the creativity focused on for this study. There is no indication that anyone felt 'forced' to act creatively in the setting. Even if initially prompted by extrinsic motives, joy in the creating seemed apparent in most cases.

5.5.2 Extrinsic motives

Although they were the minority, some participants were interested in achieving external awards. Data in relation to those considered key - money, ego and recognition - are presented here.

Money

Some talked of the need for their venture to be financially sustainable. There was wide recognition that just having a creative idea was not enough for success:

I think my creativity is more harnessed towards being entrepreneurial. Having an idea that is going to work and make a successful business. Not that makes heaps of money but makes enough money to keep it going. (C10)

Only a small minority of participants overtly acknowledged that making a substantial profit was a primary motivation (C13, C15, C30).

Ego/Recognition

During the interviews it was interesting to explore whether or not study participants believed they were ego-driven or desired recognition. By contrast to the (lack of) acknowledgment of the motive of making money, it was common for those interviewed to admit to a desire for recognition. For a number of the artists there was a sense that this was unavoidable and part of the make-up of all who chose to create a public spectacle. As one stated: *'I think we all like some sort of significance, and some sort of recognition'* (A1). A sculptor concurred:

It does and I would say that I have as big an ego as any other artist does. To have the pretence to think that what you do is worth putting out there.....To say it's not [important], that would be lying. Of course you want that. You want to be loved... 'we think you're gorgeous. (A37)

As did a writer: *'I get tremendous pleasure from being recognised as a poet or a writer'* (A42). Other participants expressed interest in being appreciated for the positive impact enacting their ideas could have on others or on the social environment: *'That's part of it and another part of it is that I have a bit of ego. I like achieving and being known for being really good at what I do'* (C28).

For some, Christchurch's unique post-disaster situation provided opportunities to effect change that were not available in more established settings. A creative ventures facilitator said:

Even if I did things that were really big in New York, I wouldn't make a dent on that city. It's so well defined. It's identity is so sort of blatant to people, whereas Christchurch, I think, is in the moment of self-definition. For me this is the most exciting city in the world right now, where someone like me, who's kind of a nobody... I have a chance to have an impact on the shape and flavour of this city. (S26)

For others recognition in the form of feedback can provide motivation. One man interviewed, who works in the fitness industry, said: *'Pretty much every day of my life I'll get feedback from someone*

saying I've done something. For me the real measure is 'have I helped people change?' 'Have I shifted you?' (C13). A musician sought recognition from peers he respected: 'The alternative to becoming wealthy in financial terms is being recognised by people whose opinion I respect. That's what I'm interested in, actually. It's become a driver' (A36).

Undoubtedly, those interviewed, particularly the artists enjoyed the personal emotional rewards of the creating. However, it seems this motivation can exist simultaneously with a motive to assist others. Creative ideas that have been, at least partially, implemented for personal gain are still able to achieve prosocial goals.

Prosocial motives

Many of this study's participants were motivated by a desire to bring benefits to their local and wider community *'I don't do things to look good. I do things to create a better world' (A33). And:*

I had a strong feeling that I had to do something. You know how people were doing all sorts of different things...I did that, cooking and running around, digging, all that...but I do have a strong drive for that sort of community, helping people sort of thing. (A3)

Some spoke of a desire to assist others reach goals: *'I guess it always drove me that I wanted to help people and wanted them to feel the same as I did' (C17). It was common for a participant to express that they 'wanted to make a difference': 'How can we make some kind of programme that actually changes the mind set of people to want to do good, and that's going to have a lasting effect?' (S29)*

It was also common for those interviewed to say they hoped to engage others to prompt thinking and feeling: *'I want to make people feel so deeply they can't help but think. That's what we aim for, we try to get a feelings response and engage people on a feelings level' (A1) One artist hoped to provide a form of therapy through art practice: 'My whole work interest focus has been on working, teaching, healing...therapeutic art so there is more of a community connection' (A41).*

Personal benefits, development and goals

A range of interview responses indicate a range of extrinsically motivated goals for self and social improvement. Some wanted to meet people and make friends: *'That was my primary reason. To meet people. That's why I really did it' (SC14). Others were motivated by a chance to enrich their lives (C13), gain more freedom and independence (C8) or create meaning: 'To make my life meaningful. I need to find a way for feeling resourceful and responsible for the earth' (SC27).*

After the earthquakes there were those who were initially simply motivated by the need to find something to do. *'I think being made redundant was very much a significant motivator because you don't just decide to quit and go to nothing. You usually have something lined up or a plan' (S20)*

Others mentioned the '*thrill of turning adversity on its head*' (SC12) or communicating a difficult emotion - '*I speak in public art language*' (A37) - as motivating factors.

The data reveals a wide range of motivations amongst those offered by participants. Although many participants were prompted to act on their unique ideas for primarily unselfish motives most of the driving factors mentioned can be considered extrinsic motivators. This may be unsurprising as all of those interviewed were chosen because their creative idea had benefitted the community through adaptive or collaborative business enterprises, unique health, fitness and entertainment models, attractive and distracting art, entertainment and other supportive actions and activities. Therefore, prosocial motivation was the strongest and most regularly identified extrinsic motivator in the data.

5.3 Summary

This chapter has shown that participants appear to have been well-supported as young people and as adults in the home. This may seem unremarkable, but it is unlikely that all people feel supported when implementing creative ideas. Is this likely to contribute to their willingness to act on novel ideas in a post-disaster setting? Participants seemed to have been open to enlightened ideas, be they from socially and environmentally conscious parents, teachers who encouraged critical thinking or mentors who were unafraid to take unique and unconventional approaches. Those interviewed were predominantly motivated by a desire to add value to their damaged community. While only a limited number seemed motivated to improve their own status, financial or otherwise, other extrinsic motives – especially those that were prosocial - appear to have been dominant amongst the sample.

The next chapter presents results in relation to what enabled or hindered those implementing creative ideas in Christchurch after the earthquakes. These results address research objective two, to 'identify the ways in which creativity activity occurs in response to situations of collective adversity'.

Chapter 6

Results Part Three: Enablers and Obstacles

6.1 Introduction

The creativity, disasters and entrepreneurial literature all reveal that opportunities to be creative after a disaster are plentiful (Monllor & Murphy, 2017; Klein, 2007; Cretney, 2016) and that people commonly take those opportunities to act creatively, particularly when alternatives are necessary (Chamlee-Wright & Storr, 2010; Storr et al., 2016). However, little is known about how those ideas proceed during the implementation and early stages of a post-disaster creative venture. The results presented in Chapters 4 and 5 have provided knowledge that assists in addressing the questions ‘Who?’ And ‘Why?’ in relation to creative idea implementation after the Christchurch earthquakes. Data that inform the results presented in this chapter were gathered to understand what participants believed enabled or hindered their creative goals. Enablers and obstacles are presented thematically, beginning with the enablers. Participant responses with reference to support in relation to material assets, funding, emotional and social support, a spirit of recovery, and networks are provided, followed by those in relation to (particularly local) government. Earthquake-prompted opportunities identified by those interviewed are overviewed, specifically needs generated by a lack of alternatives, greater freedom, reduced rules and a shift in attitude towards a greater acceptance of non-traditional or conventional approaches. The final enablers discussed are publicity and recognition before significant results extracted from the data concerning obstacles to creative idea implementation are presented. These results are categorised into the following themes: material barriers, a reduction in emotional and social support, obstacles presented by local and central government, general uncertainty, elite panic and a return to ‘normal’.

6.2 Enablers

The following section presents participants’ comments drawn from the data because they each indicate something that assisted or supported them during the implementation or early stages of their creative venture.

6.2.1 Material support

Material support was essential. Some benefitted from existing assets, while external funding and insurance payments were also key financial enablers for some participants.

Existing Assets

The possession of existing assets was an important supporting factor. Some had premises, or other forms of capital readily available for swift investment to enable the implementation of their idea. A gallery-owning artist said: *'The whole reason it works is because we own the building'* (AC3). Another participant felt enabled and unrestricted:

You can't ignore the fact that we've had a bit of money behind us the whole way. So it's not like we're on the bones of our bum. If something goes wrong we've got time to, perhaps, recover and do something different. We just have to have the courage our convictions, if someone says it's not going to work, I say it is going work and I just do it. We don't have to have the bank...with a bank it's really quite hard. You have to show them a business plan. (C10)

One artist received a timely inheritance that allowed him to focus entirely on his creative work, without concern for how he was going to pay rent:

Another major thing that's been in our favour, too....that's pretty much enabled us...is that we had a house inheritance at the beginning of the quakes...so that put us in a position to be able to just do what we wanted to do....we would have had to have worked. (A35)

Those who were financially comfortable, or owned property that could be utilised, were quickly able to activate ideas. They did not need to rely on the support of others. However, there was range of external funding options for which idea implementers could apply.

Funding

Supportive financial aid became available. This enabled many of the participants to carry out their ventures. There was a range of funding open to some involved in this study:

I remember at the time, you had a grant didn't you?...small businesses....and that really kick started things. It was sort a lump sum for three months...and that was amazing... And that was enough to get a bit of advertising starting and....that was a really good thing. (AC3)

And:

We applied for one of those grants, so we were able to get whatever it was. It wasn't a lot but it was enough to help out with some of the costs to transition the equipment over. (C15)

While some benefitted as the recipients of grants available to support small businesses, others received more field-specific funding. Approximately half the number of participants spoke of the contribution this money made to their creative ideas: *'I got a UC innovators summer start up*

scholarship. That gave you \$5000 to create the enterprise. Everything was just so well done and brought together in a timely way' (S29). A participant in the broadcasting industry said:

New Zealand on Air were absolutely crucial at the time. They were very sympathetic and we got additional funding from them on top of what we usually got annually. We relied on them heavily and they were amazing. (C28)

One social entrepreneur and sustainability campaigner initially struggled to find financial support. However, once established and known for her unique achievement she was able to obtain funding:

It was interesting because she said when she went to the directors, who made the decisions about the trust, every single one of them knew who I was, and knew what [business name] did. So because I'd left it nearly three years, and was not coming in new with no experience and nothing to stand on, by the time I did go for it was a really painless experience because we were already established and people knew what we did. (SC22)

Another was supported by an earthquake-prompted redundancy pay out (S20), while others were financially aided by insurance (C8, C9, C10, C18, C30). The availability of funding from a range of providers allowed many participants' creative ideas to be implemented or sustained.

Emotional and social support

Family, friends and partners were reported to have been supportive, enabling participants' creative actions. Those close to participants offered a range of support that helped enable creative idea implementation. Parents were mentioned, perhaps unsurprisingly, by younger participants as being particularly supportive. Some talked of parents who had nurtured and encouraged their recent creative activity (C2, C8, C11, SC14, A21, S26, S27). Others received material support: *'I am very lucky in that I live with my parents'* (C17). Some had other immediate family members with connections: *'My sister works for Creative New Zealand in Wellington, so I was also able to pick her brains. She was helpful with some respects, especially the first year'* (C16).

For some participants the support came from partners, almost routinely emotionally but also materially: *'I was free to do that because my partner is a teacher, she's a secondary school teacher and she works full time'* (S39). Others interviewed spoke of being able to utilise specific skills offered by supportive friends and associates: *'My flatmate is an intellectual property lawyer. I was really lucky in that respect and she helped me until I figured out what my position was'* (SC11).

A social entrepreneur spoke of the appreciation she felt for a friend's financial support at a crucial time in her idea activation process:

She said 'How much do you want? I'll lend you this amount of money and you can pay it off starting in a year's time'. So she lent me 5K and I lived off that for 6 months, and then my lovely graphic designer friend, she let me have all the work she'd done for an extended time.(SC22)

Another participant was also helped by a friend with practical skills: *'My friend, I told him about my idea and he said He does steel work....he said 'come to my factory and I'll make a mobile grill for you and you can move on the idea you were telling me' (C19).*

Other forms of supportive social capital include the participants' being part of a team or group of people – often involving family or friends - who could offer complementary skills during the instigation, implementation and management of their implemented creative ideas. In some cases the team was family: *'We've all fit into quite good roles. Everything I'm good at my sister's not interested in. My sister's the sensible one who pays the bills and tells me when I'm spending too much' (C8).*An exhibition coordinator said:

My family. We're also fairly tight. The other thing was, when we were talking about whether we would go ahead and doing something like this, there were only three or four of us involved and we each had a different skill base. [Daughter] was able to worry about events. My husband was able to talk to us about logistics and how we should be looking at it from a business point of view, you know, whether it was going to be profitable or not. I was able to tell them how to run an exhibition and how to contact the artists. And because there were only three of us making decisions I felt safe. (C16)

Two manufacturers, competitors in a creative industry, were enabled by their ability and willingness to work together. They found a way to benefit from their differing personality traits in an unusual business environment:

We had different strengths, and obviously weaknesses, but it was a nice collaboration. He's very well organised; super, super organised, probably a little more higher strung than I am, whereas I'm a bit more cruisy. (C18)

Another participant felt their idea would not have been activated if it were not for her particular team of supporters and collaborators:

The team. The combination of our skills and the thought processes. The actual sort of content that we brought to the table, and in terms of the credibility or mana in the community....if we didn't have a group of us doing it wouldn't have happened. (S26)

One social entrepreneur emphasised the importance of like-mindedness to the process:

It comes down to working with great people. That is where I'm most happy. With people I can really trust, who are on the same page. Who understand what we're trying to achieve and then we can just create things and make them happen. (S20)

The same participant credited a co-creator as the reason for the enacted idea's sustained success: *'He is the main reason that [social enterprise] is as successful as it is. It's his values and his vision that keep that going' (S20)*

It is notable that all participants reported feeling supported. Most had spouses, family or friends that offered material and emotional support. When a venture was community focused, volunteers were often reported as having been available to help and provide encouragement.

6.2.2 Enhanced sense of community due to a spirit of recovery

The earthquakes appeared to trigger an enhanced sense of community: *'Neighbours started knowing each other' (A33)*. What was also noted as an enabling factor was that social hierarchy dissolved in the process. Suddenly, the wider community all had something in common:

I do think that the best thing to come culturally after the earthquakes is definitely a levelling. That collective consciousness of experience, not just the earthquakes but the aftershocks as well. I've never experienced such incredible examples of collective consciousness as when you're sitting in a café and an aftershock happens and everybody's thinking 'should I move?' And I found...having conversations at the bus stop, 'Are you OK?' There was real communication going on and I think to a certain extent that stayed. I know there's still that element of snobbery there, but it's nowhere near as divided as it used to be. Yay, it's no longer the first question you get asked, 'What school did you go to?' it's 'Oh, did you lose your house?' or 'What happened to you in the earthquakes?' (SC22)

Others recognised the experience as similar to what was known to have occurred after previous disasters. The joint experience of the earthquakes, along with the uncertainty that followed, led to the impetus to work together and help others. This was a highly supportive factor noted by various participants, particularly in the early recovery phase:

There is a community now that didn't exist before the quakes...It's the spirit of recovery. People used to talk about in World War 2, the blitz spirit, in the UK. 'We're all in this together. We're going to help each other'. We had our own disaster here, didn't we? People rallied, a lot of people rallied. And when you rally people you can achieve amazing things...when you rally people with the same goal. You can move mountains, and this is a mini mountain in that respect. (C7)

An artist reflected on the fact that many in the affected community were looking for ways to help others: *'There were also a pile of volunteers. There were ten companies who gave their services and their skills to it'* (A37).

One business owner appreciated that locals wanted to patronise his new venture in order to be supportive: *'The whole community got behind us. The bar was packed'* (C30). Another found people did not expect payment, making a contribution to the recovery was recompense enough:

Yeah, everyone's supportive... on the weekend I'd have up to 8 to 10 guys...and women working through their weekend to help us out. I had two guys who took two weeks holiday to come up here and help us out. I'd give them a beer afterwards and half a scoop of chips for lunch. (C8)

Community spirit appeared to prompt a desire to contribute and collaborate, particularly in the early recovery period. Another participant noted: *'People were prepared to give time. Sharing their time...getting involved, getting amongst it'* (A21).

A businessman, who created a unique business model, credits the spirit of recovery as a contributing factor in his decision to collaborate with a competitor during the unusual circumstances:

Around that time it was very much a period of, I guess, bonding of the community a bit. I think it was sort of shown with that sort of situation. It took both parties to expose themselves quite a bit and I guess there was no guarantee it was going to work. (C15)

Another interviewee explained that a sense of unity allowed *'you to feel a lot more comfortable about working with people you don't know that well'* (C7).

Not only do the data reveal the practical and emotional support that evolved due to an enhanced sense of community, but it fostered personal development. The emotions brought about by the experience of volunteering in the post-disaster environment tended to generate a personal commitment to continue to participate in community work in the future. This was expressed by participants who had been members of the renowned volunteer group, The Student Volunteer Army³:

I started volunteering. I thought, actually it is a good thing and you meet a lot of people and you hear about their stories, and they're really cool stories. So it helped me grow as a person

³ The Student Volunteer Army (SVA) evolved from a Facebook page created by University Canterbury student, Sam Johnson, who called for those interested in helping provide non-lifesaving aid. More than 2,500 volunteers were instrumental in clearing more than 65,000 tonnes of liquefaction and providing other assistance for local residents affected by the earthquakes (Student Volunteer Army, 2019).

and I learned a lot of skills doing that. So it's a balance, I'm out there helping people but at the same time they help me, and that's what helps me continue to do that sort of thing. (SC25)

This sentiment was also noted by another: *'The sense of community probably started when I was really involved in the Student Volunteer Army. That really made me realise how wonderful it was to help people where you had no connection to them' (S29).*

Another interviewee believed an increased sense of community and camaraderie contributed to enhanced support from others:

I guess it (the earthquakes) kind of quashed the naysayers because they had enough to worry about in their own lives. So there were many more people going out and saying 'Right, I'm going to do this' ...oh, 'Good on you'. Maybe they felt really downtrodden themselves and thought 'well I couldn't do it, but I really want to look up to someone who is doing this cool thing, and that's going to lift me'. You sort of took on this mantle, like you're doing it for everyone and being a bit of inspiration. (C9)

6.2.3 Networks

Some organisations became well known for their creative ideas *and* their willingness to support and enable others. In particular, social entrepreneurs and creative space users, Gap Filler and administrative arm, Life in Vacant Spaces, predominantly landscape focused Greening the Rubble, and creative idea facilitators and supporters the Ministry of Awesome. By encouraging involvement and creative activity generally, each group provided opportunities to network with like-minded, creative individuals. The creator of a unique waste disposal operation appreciated this support:

I know Gap Filler, Life in Vacant Spaces and Ministry of Awesome ...they're such a network and they've sort of bought me into that network as well, and it's fabulous. Even my accountant's a social enterprise...they said 'Just choose what discount you think you need'. When does that happen?...Everybody wants to share knowledge. Everybody wants to support each other. (SC22)

So, too, did a chef:

They helped me....as I say, I saw them around and I saw these projects going on, all these art projects, and pop-ups and what have you...and I saw all these happening and I was cycling past one evening and I saw the pallet pavilion that was there and I saw the pizza oven. And I thought 'Wow, there's something food-related. I can be involved. I can be active in that

community'... And they just said 'Yeah, you can do it' and I just kind of went to them and they were like 'Just do whatever? (SC14)

As well as being enabled by networks created in response to the earthquakes, another participant formed networks with pre-disaster associates. This enabled and supported the creative projects he became involved in:

I had the opportunity to meet lots of interesting thinkers of Christchurch and the region, over about a two year period, and formed networks of friends and contacts that have continued to this day. It would have been harder to get stuck into a project like Greening the Rubble without having that network in the city. (S39)

Others were aided by the support of those who shared specific goals:

We worked with New Zealand Trade and Enterprise and obviously Callaghan because we knew them....and we only went to those two because we knew that their mission in life was to help companies grow the wealth of New Zealand. (C7)

Overall, although some networks were more formally organised, they all appear to have evolved in response to need, attracting like-minded people to work together for mutual benefit and thereby greatly enabled creativity to proceed. Local government were also instrumental in connecting people with those who could assist them or shared similar values or goals.

6.2.4 Local Government

Study participants who interacted with the, predominantly, Christchurch City Council (CCC) in relation to their creative ideas generally found the local government entity to be supportive and enabling. A social entrepreneur said: *'What I have to say is our City Council, so far, has been wonderful' (S20)*. Some spoke of appreciating the support they received in the form of funding:

We've had ongoing council funding, and quite a lot more than the \$10,000, so organisationally we've been in a pretty good position. We've met a lot of people within local government....and I think the general ethos....at least with the particular team that we usually work with, has been to try and solve those problems and be facilitative...I'll happily sing the praises of Christchurch City Council and our experience has been great. (S4)

Council funding gave idea enactors the financial capacity to activate their creative ideas: *'The City Council could see the need for transitional projects to help re-enliven people...so they gave us some core funding...' (A21)*. Others were also supported by funding linked to the Christchurch City Council: *'So I came in and there was some money available, apparently, according to the council. There was*

the creative industries sustainability fund, post-earthquake. There was also the earthquake recovery grant' (A43). A unique educational entertainment centre administrator said:

The funds that were initially used to found this came partially from post-earthquake funding. So there was a few million dollars that was put into projects in the central city. So we received about \$60, 000 from that, which made it possible. It made everything possible. And then other support from the City Council wanting to revitalise the city and things like that. (SC44)

The post-disaster setting presented unique opportunities for reciprocal arrangements that benefitted both the devastated city centre and those willing to implement unique ideas. One participant wanted to create a hub from which fellow creative people could operate. He found the CCC was very supportive:

They looked at the map and said 'Well, there's loads of derelict land. If you can raise the money and build a business then we're keen to help you.' What the council contributed, because we have to pay off the whole building within five years....that wouldn't have been possible with traditional leasing models. So we got a peppercorn rent of a dollar. That enabled us to borrow what was required to construct this building...The numbers just didn't add up otherwise. We couldn't have paid commercial lease and built this. (C7)

Importantly, some of the elected members of the Christchurch City Council, who campaigned for office knowing the challenges ahead, made an important contribution. Some were known to be involved in transitional, creative projects and realised the valuable contribution they were making to the recovery: *'Some of the councillors are more open to transitional projects, like Vicki Buck, Lianne, Raf...' (SC25). An artist and social enterprise worker commented:*

And the Council, I really like the current council, how they've supported projects like ours. I think Lianne's [mayor, Lianne Dalziel] great. And even though they're broke they still put money into stuff like ours...they see it as important. (A21)

A creativity hub instigator reinforced this notion:

I really think that most of the people that are working, certainly in our local council, most of them – 9 out of 15 - came in after the quake, new, and they all came in because they wanted to be part of this reimagination of the city. Even if, again, I disagree with some of the specific things they do, we have a really good group of people who are not there for political glory, who actually came in at the hardest possible time and are really doing their best because they believe in what the city can be.(S26)

Some recognised that the City Council did not appear to know how to become involved or regulate idea enactment in the unprecedented circumstances as beneficial:

Now they didn't necessarily know what I was doing, but the relevant councillors would have realised that if those retailers knew I had a consent to do this all those retailers would have complained and it wouldn't have worked. But after the earthquake there was nothing. It was a desert. It was a clear run. Because I was the only person spending money, I walked in the door and they said 'This is great'...It was easy to do and all the red tape fell away. (C30)

An innovative hospitality entrepreneur also felt inadvertently supported by the overwhelmed City Council:

I also think they're turning a bit of blind eye because I think they're interested in what we're doing, trying to push these boundaries.....I don't know if they're doing it on purpose or if they're even conscious that I'm there or on their radar...but I probably am because they paid for me to go up to Auckland once with Christchurch Tourism. (SC14)

Participants who operated within the jurisdiction of the Selwyn District Council (SDC) discovered it was also supportive of enabling ideas that indicated rejuvenation:

They met us with open arms and have been so supportive. With licencing, all the way along. They knew it would be and cool and different. The building department, I think, were told in no uncertain terms, that they had to make sure this thing went through. I'd just call the building inspector and he'd come each week and just give me the nod of what I needed to do. (C10)

6.2.5 Earthquake-prompted opportunities

The earthquakes triggered several enabling factors that allowed for creative ideas to be implemented with greater ease than they may have been prior to the disaster. There was a need to substitute or replace goods and services that had been lost or damaged, some participants found themselves with more time to act on ideas, and there was greater acceptance of alternative approaches.

New needs and a lack of alternatives

The earthquake destroyed much that was part of peoples' everyday lives. The destruction resulted in both the loss of necessities and lifestyle options. There were plenty of opportunities for these to be either adapted, repaired or substituted with creative alternatives. *'I think the biggest thing is being able to see the opportunity, see the potential because a lot of businesses were wiped out, so there's all this potential now to jump in' (C17).*

Another participant found the lack of competition made it a good time to try a creative idea. People had less choice, so were prepared to experiment with alternatives like this chef's mobile restaurant: *'Many restaurants closed and customers didn't have much choice, so I could come to their place and they were all happy. So, actually, good for my business'* (C19).

While many attempted to ensure that regular services were restored or replaced, others developed creative alternatives. The data reveal that creative businesspeople, in particular, were forecasting opportunities that could be capitalised on during the recovery period:

They were coming to my classes because they needed a creative outlet because they had been so emotionally affected by it. Some people were just coming to do something because they were living with relatives and waiting for their houses to be built...I was very aware of what it had done to people, but I was also very aware of a whole new business opportunity for a lot of people. (C16)

And the rebuild phase: *'People were building new homes. People were building new offices. They wanted something new to put in them as well'* (C16).

Others interviewed could see the unique opportunity the damaged city presented with regards to those with new and interesting ideas being able to make their marks. One said

I think with Christchurch it's that smaller city, and all the talk about rebuild, it gave me the realisation that 'Yeah, I can be a part of that'. It sounds cliché but it's just straight up truth. You look around the city and it's empty... what city in the world gets the chance to rebuild their CBD? (C24)

Another participant could also see the development opportunities:

Christchurch, I think, is in the moment of self-definition. For me this is the most exciting city in the world right now, where someone like me, who's kind of a nobody, I have a chance to have an impact on the shape and flavour of this city. (S26)

Greater freedom from responsibilities and rules

Another enabling factor was the release from responsibilities. Participants who found their circumstances had changed because of the earthquakes were presented with unexpected choices and opportunities:

Especially after February 2011, the first six weeks, it was like being in a revolution, but without a social movement. Everything was upset but every day was like a Saturday because people weren't going to work. (A36)

One participant found a chain events triggered by the quakes resulted in a sense of freedom that ultimately led him on the path that would result in taking more creative options:

It was strange, but it was actually quite beneficial because it put an end to it. I was in a house. I was living in Lyttelton and the house I was living in got red stickered. I wasn't living there anymore. I wasn't allowed to go back in. The restaurant that I was working in at the time fell down.....and I broke up with my girlfriend, so I didn't have anywhere to live. I didn't have a long term relationship anymore and I didn't have a job. It was amazing. And I saw that as a really exciting opportunity. (SC14)

Another was enabled by suddenly having the time to reflect on her life before activating several socially beneficial ventures:

I thought 'this is a golden opportunity for you to stop and rethink....to percolate'. Because I had been really busy.....just go, go, go....and I had a redundancy pay out from the arts centre, which meant the financial pressure was off. I just slowed right down and spent a lot of time thinking and gardening. It was actually really difficult for me. There were a lot of questions about who you are if you define yourself by what you do. But I just felt like there was something in me, something I should be doing. (S20)

An artist spoke of the freedom that arose due to many in the affected community being distracted and not focused on maintaining regular routines and rules:

I think that for a while after the quakes people were just too busy looking elsewhere and doing other things... so we got busy.... and we took advantage of that thinking that 'this could stop at any time'. (A35)

Attitudinal Shift

Participants identified a significant shift in attitude in relation to the acceptance of more alternative approaches and creations. This was regularly reflected in comments from the interview data. Some believed the city was ready for such a change:

Now you can't wish an earthquake on any place or any people, it's horrible, and I don't even like myself for thinking like this, but I do think Christchurch needed a bit of a shake-up. It will be more diverse as a result of this. (SC40)

A prolific creative venture facilitator and supporter was very aware of the shift:

There are huge changes, right? There is definitely more appetite for new and unusual ideas. There is definitely a sense that some....it's not that there isn't any conservatism, there's still

quite a lot of conservatism, but it's a lot easier to go around it and to find people who will champion whatever it is. (S26)

One musician commented in relation to how he thought the shifting social setting helped enable different ideas to flourish:

One of my friends, who's a lawyer, made the comment that after a few weeks 'all bets were off'. You've got rich people who were financially crippled by it and you've got poor people who got financial windfalls from it. It really rejigged all the rules in a really interesting way. I know there was an ideology...kind of a wisdom that became accepted in society....that creativity would be a force that would help us to rebuild. I don't know how much I accept that, but certainly the fact that that the idea was prevalent made it easier to get away with doing stuff and there were more opportunities. (A36)

This concurs with aspects of another participant's view:

I felt like you could visibly see the 'old school'....the old guard who had all the power....you could see them visibly stepping back and saying 'someone else take the baton' and almost pleading 'we can't do it, this is your chance to go with it'. And they had so much more to deal with because they had the wealth. Where all the young ones were more mobile and they could actually mobilise. It was almost like a total handover. Even though not literally I think it is happening. (SC12)

Overall, the shift in attitude was noted and appreciated. What follows is a range of participant comments that reflect this. The extensive list is included to emphasise the extent of this belief and the significant consideration the importance of this development was given by many participants. A social entrepreneur noticed that people were now more positive when assessing unique ideas:

That's definitely an area that I've noticed a shift since the quakes. I can probably recall at least a dozen conversations where somebody had an idea [prior to the earthquakes] and the conversations were always the 100 reasons why it would never work. And now it feels as if that's kind of been turned on its head. (S4)

A common theme was the shift away from more conventional approaches and towards the ones that were 'more edgy, more experimental, and more courageous than pre-quake Christchurch' (S39). A creative publican and well-known social commentator stated:

It's shaken a little bit of that conservative nature....conservative's not the word I'm looking for...it used to be a slightly stuffy city. A little bit out of date. And whether you like the buildings

or not, they're an update on the city. And it was a city in decline...it had lost its enthusiasm....the central city specifically. There are more novel ideas than there used to be. I think you've still got the old establishment who liked the city as it is and they'll work hard to maintain the status quo, but there's definitely room for young people to come in and do things that wasn't there before. And looking at the population as well it's brought a bunch of different cultures into town which has made us a little bit multi-cultural. (C8)

A community-fundraiser identified a clear desire to seek distance from the past: *'I don't think people want that title anymore, being an old, and conservative English style city'* (SC12). A woman who was able to gain scope within a normally traditional government department to implement a creative idea, believed what was occurring in the city – perhaps through 'desperation' - was having a flow-through effect:

I think it's become less conservative. Well I'd like to think so. That was something that really bothered me, how conservative it was. I think because we've been picked up by the collar and rattled around. I think it was specifically the earthquakes. It was the environment. I mean you look at what's bubbled up in Christchurch ...the little trusts like Greening the Rubble and Life and Vacant Spaces. All of those little groups who have bubbled up....they had that architectural festival.....what's it called? Festa....things like that we didn't have before the earthquakes. There is a lot of creativity that has sprung out of that necessity...that desperation. (SC23)

The following, from an interview with one of the most prolific creators, encapsulates the sentiments expressed by many participants and provides insight into the fragile and potentially ephemeral nature of such an attitude change in a city where traditional views and approaches have deep roots:

I think in Christchurch....there's been a change of perception around what's possible. We've heard that many times. Now it's more anything goes, where previously people talked about conservative Christchurch. A lot of the things we've done would have been possible before the quakes. They would have been harder practically....like siting them or whatever...but of course they would have been possible, it's just that with people going through that collective experience with the trauma of the earthquakes, it changed people's perceptions about what's possible, and made people available to get involved in a way that they wouldn't have been previously. And I think that the city is now more creative....I think people...their value of creative aspects of the city are more obvious than ever. However, I think it's more in danger of just being erased by the coming development of enormous buildings of glass, that are quite stark, and there is a bit of a tension around how do we retain that. (S20)

The word 'opportunities' was one of the most commonly recorded amongst participants' responses. Many believed that as the wider community appeared to relax their attitude with regards to a preference for more conservative or traditional approaches and solutions, opportunities arose to utilise unexpected alternative spaces for both performance and business purposes:

Post-earthquake Christchurch has been full of opportunities, space that's not being used and people having to rethink the way they do things. And I think there's a lot of opportunities for ...not just young people, but anyone to take those opportunities. (A43)

Another participant, who had regularly performed in traditional or purpose-built entertainment venues before the earthquakes, enjoyed and took advantage of patrons' acceptance of the need to visit alternative spaces:

There was a period when people were just organising gigs anywhere.....in a shed, on an empty section. And that was great. I really enjoyed that because it meant that people were doing things that they wouldn't have otherwise done creatively.but the opportunities... Not only were people open to events happening, but people were prepared to go to events in unusual places....it was either that or nothing. It wasn't that you were trying to persuade them to go to a garage or a coffee roaster to go to hear a gig. They're rather go to umpteen different clubs, but umpteen different clubs didn't exist. So what are they going to do? They're going to go to the coffee roaster. (A36)

6.2.6 Publicity and Recognition

Gaining publicity and positive recognition for their creative approaches enabled some participants to persevere and flourish.

A creative publisher credited the major contribution publicity made to her success:

I think the things that have far exceeded my expectations are the doors that it's opened...the opportunities that have arisen from it. I did an interview on TV One....that newspaper column ...that was where it all started. That was picked up, it was also in the Dominion Post because The Press and Dominion Post are owned by the same....and then there was a guy in Wellington who did a short video of me and that was pushed out in Auckland and then it was in the Herald. (SC11)

For another participant increased recognition for work completed in prominent areas of destruction helped build on a previous foundation which led to greater support:

Like even pre-quake I had some a bit of a following and somewhat of recognition, but now that I'm painting more photo realistically and out there a lot more in the public it's picked up a hell of a lot now. (A35)

A social activist was enabled and supported by those who were attracted to and interested in working to promote a cause that was also important to them:

But in terms of the payback the biggest thing that I find really wonderful is that the media attention will draw the likeminded to me, so I'll get neat people....and a lot of people involved in the project...people who were drawn to the values of the project because they were things that they already understood or practised in their own lives. (SC27)

As demonstrated, participants could account for a range of personal and contextual enabling factors. However, there were also notable obstacles, particularly to how creativity was able to proceed beyond the initial post-disaster period.

6.3 Obstacles

The factors that participants viewed as obstacles can be thematically categorised in a similar way to the enabling factors. Financial issues, waning emotional and social support, the post-earthquakes path of both local and central governments, in addition to ongoing general negative aspects of a disaster zone were all seen as hindrances by interview participants.

6.3.1 Material barriers and financial approach

Most participants were driven by prosocial not financial motives. As discussed, there were abundant funding options available. However, if a creative venture was to be maintained, the ability – and desire - to strategise financially seemed necessary. A laissez-faire attitude to the financial aspects of creative venture maintenance was apparent in comments by an alternative guide book creator: *'The money kind of comes and goes, and that is a little bit terrifying. But I guess it's an example of my personality'* (C2). A musician used to looking for creative solutions did not view wealth as a measure of success:

Money isn't the problem...not having money doesn't matter. There are other ways to solve the problem than money... Money's immensely useful, but that's not my prime criteria. If I was thinking about money, inevitably I would regard my career as unsuccessful. (A36)

Others did not aspire to be financially wealthy: *'I want to pay my bills, and eventually pay for my house, but I don't have any great aspirations'* (S39).

Another artist interviewed concurred: *'We're comfortably off and I don't think that we're all that materialistic'* (A1). A food collective manager said:

I would like to earn money but it's not really the biggest draw for me. At the moment I can work to sustain myself. It's never been an issue. It would be nice to not worry about how much money in my account, but at the end of the day it's not what's important. (SC25)

Other participants may have liked to give more consideration to wealth accumulation but were deterred by the stigma of it amongst other like-minded, valued-driven individuals:

Are we allowed to make money? Do we do something now that is going to be helping organisations to help these people....or do you make money? Then when you're older do you give that money away? There is that kind of stigma about money being evil and that kind of thing. (S29)

Some study participants, particularly those involved in business before the earthquakes, claimed profit creation to be a motive and had demonstrated financial nous. A community fitness programme creator was one who had financial nous: *'Very early on I learnt financial independence. Like I got mortgage free by my early thirties, always got a rental property....I've invested well'* (C13). However, this group was the minority. One social entrepreneur expressed how she learned the importance of focusing on the business intricacies of a creative venture:

If I did it again, with the experience of running a business that I have now, I would be more driven about that stuff because I've learned first-hand how important it is to get that commercial stuff right so you can do it well making it an ongoing thing.....I really am passionate about business being fundamental to this kind of....to valuing this kind of work. The finance stuff let us down because it wasn't. I just learned that in order to value what it takes to do something as difficult as that.....those efficiencies around cost and margins...having that functioning in a healthy manner, I learned the importance of that by not having that, of having to struggle. (SC27)

The lack of financially-driven participants in the study sample may be of interest given entrepreneurship is commonly linked with business in non-disaster settings.

6.3.2 Waning emotional and social support

As time progressed it seems a weariness developed which resulted in people having less time, patience and sympathy for earthquake associated issues and needs.

Creativity and helping fatigue

As time progressed after the earthquakes, it became more difficult to gain financial or practical assistance to maintain ventures. In the five years following the most devastating event on February 22, 2011 there had been in excess of 10,000 aftershocks, so the community was still anxious and tired (NZHerald, 2016). Many had ongoing challenges or were returning to a more regular, pre-disaster, existence. A public artist found it difficult to find volunteers to support large scale projects: *'People are tired. And you're always asking for help from the same people...the same team of people'* (A1). A prolific creator of prosocial ventures noted this change occurring about three years after the February, 2011 earthquake: *'I feel that the last year has been one characterised by a lot of creative fatigue ...personally, I feel like the last year has been hard'* (S20). Another participant talked of the intense competition that existed for funding in a city in such dire need of so much. People were tired of giving: *'I think there's a fatigued community in terms of fundraising. It's actually quite difficult in Christchurch'* (SC40). As time went on accessible funding diminished even further: *'The funding has fallen through the floor.... a lot of the energy starts to peter out, especially after five years'* (A43).

The reduction of both emotional, practical and monetary support all appeared to contribute to feelings of demotivation and negativity regarding what may be possible in the future. This was a psychological barrier for some who began to lose momentum.

Life disruption and emotional effects

Most interviewed for this study had their personal lives disrupted to some extent. Unsurprisingly, this was not a supportive factor when it came to implementing and sustaining a unique idea in the unstable community. Some participants lost their homes. One said: *'It fell over. It was one of the few that properly, kind of collapsed'* (S4).

For some there was the added emotional distress of losing lifelong family homes with immense personal, aesthetic and historical value: *'We'd been in the house for 40 years. Beautiful arts and crafts house in Sumner'* (C30).

Others lost their homes after being affected by 'greedy' landlords trying to capitalise on the desperate need for housing in the city (SC22). Other participants spoke of disruption caused when business premises were deemed unfit for business. One furniture manufacturer dealt with this dilemma after initially believing the building was safe *and* coordinating a family move to allow earthquake repairs to his home. It was not until later that he realised how debilitating the ordeal had been and the toll it had taken:

And I thought I was cool...then I broke down and cried ... but it came out of the blue because I thought I was fine. What really hit me hard was we had to make all our staff redundant and

that was really hard. I don't know what it was, but all I could put it down to was emotional and mental exhaustion. I just felt sick. I couldn't even drive home from Bromley over to Strowan. I had to pull over to the side of the road. And when I got home I slept for about 24 hours. It was just full on. (C18)

An artist spoke of the distress and uncertainty caused by earthquake-prompted redundancy in their home: *'My husband lost his job, which made a difference. He was uncertain of what he might dowe had two fairly small children. So it was like we were trying hard to go forward and that set us back' (A41).*

Many people in the city suffered – some for many years – while they waited for the Earthquake Commission (EQC) to assess earthquake damage so property repairs could at least be initiated, let alone completed. One innovative business operator said:

I had absolute screaming matches with EQC on the phone. That was an effect of trying to grow a business. That whole period of time, that plus the business...and then I got ill. You kind of put two and two together and it doesn't surprise you. (C15)

Delays in receiving insurance payments were also detrimental for some: *'We finally got paid out, four years after the event' (C18).*

6.3.3 Contextual Challenges

The earthquakes brought administrative, systemic and other changes to the routines of those operating in the city. These changes presented obstacles to creative idea implementation.

Christchurch City Council (CCC)

Although the CCC were praised by participants for their support and funding, some felt impeded by what appeared to be an overly-cautious and unreasonable attitude given the unique circumstances.

A businessman in the hospitality sector said:

I just kept saying 'You've got to understand this guys. It's not business as usual, it's unusual.' And I'm saying as long as it's safe and it's not going to fall on anyone or kill anyone, and as long as it's not going to catch fire. As long as anyone's not going to get hurt or killed, what's the problem?No, it was too wacky and out of the box'.

Although he did understand why this was the case: *'They were very conservative people doing a tough job at a very tough time. Terrified that they were going to be held accountable. (C8)*

As did another creative idea implementer: *'I think it is more difficult now. I think that has come about because the council are quite jittery and there's huge health and safety issues'* (A1).

Uncertainty, business disruption and obstacles

Moving into an unknown future brought problems for those trying to sustain their creative ideas as the city moved from a recovery to regeneration phase. Some could see obstacles ahead as earthquake-generated raw material became less easily accessible. There seemed to be a need to evolve to suit the changing post-disaster environment. A participant involved in creating with a landscape-based collective said: *'Because, for Greening the Rubble, we can't keep going because the rubble's fast going to disappear.....so we need relevance and we're trying to develop that'* (A21)

The unpredictable nature of the setting meant those who could have provided valuable investment were nervous. A social entrepreneur with a business that produced popular products was negatively affected by this perceived attitude:

We were effectively building a business on the basis of a supply chain that at some point was going to dramatically change. So if an investor was to come in and say 'Oh, I'll invest in your business' all I could say was 'Well, we'll do this for as long as it's authentic to do it; as long as there's waste to divert away from landfill we'll keep doing this and maybe we can look at other options'....but obviously that wasn't enough for them. So at that point we were probably a risky prospect... By that stage we'd been functioning as an undercapitalised business, so our inefficiencies in production appeared as risks ...which totally makes sense. (SC27)

The perception of Christchurch by those outside the city led to difficulties for commercial and artistic creators alike. Some were hindered by the loss of essential members of their supply chain:

There was a real big hard dip. Two of our biggest suppliers were both damaged in the earthquakes... so that was a big knock to our front line. And the other thing is the rest of New Zealand stopped putting orders in. They didn't really want to bother us. We were just 'give us some orders. (C18)

Another participant spoke of the general flatness of the Christchurch retail market beyond the biggest traders:

As a market it's still slow. In terms of fashion you've got some really big centres. You've got The Tannery, Riccarton Mall, and The Colombo and things like that....and there's a few local brands popping up here and there, but I think until we get that real sort of shopping vibe in Christchurch it's going to take a bit of time. The market's still quite small. People aren't willing to try new things just yet. They're happy with the status quo. (C24)

An artist reflected on how the earthquakes had affected pricing and an alteration in the perceived value of creative products generally:

With people that I know, other artists who have been here way before the earthquakes, we have discussed how, mentally, we have this attitude where we can't, for example, charge as much for our work, sometimes, not as much as I would have twenty years ago. So I question it and I feel as if I have to justify it. I know people are not spending in the same way. They're seeing art as more of a luxury, which sounds like an annoying thing, but it's true, instead of seeing it in view of how it can help them and nourish them. (A41)

This artist also noted the loss of the tourist market, which was another hindrance to, particularly, artists being able to capitalise on their creativity: *'All the tourists left. Tourism is a huge part of being an artist in Christchurch'* (A41). Other participants, like C5 and C6 suffered as tourists - their major market - had been discouraged from visiting the city or feared future earthquakes.

It was also difficult to find premises. Competition was stiff as so many of the buildings that had been destroyed were in the city's 'Red Zone', or were uninhabitable for safety, practical or aesthetic reasons. A publican discovered this was the case when trying to circumnavigate the problem with a unique proposition: *'And there were no leases available. The original idea was to be able to move the thing [a unique transportable bar] but the reality was you had to licence the location'* (C8). Another participant, whose hunt was delayed, discovered that those who found they needed an alternative premises in the immediate post-quake period had been advantaged:

We looked around and it was already 18 months after the February earthquakes, so there weren't a lot of factory spaces available. There was one but it was half the size and twice the price so that wasn't economical. (C18)

A social entrepreneur also experienced similar challenges:

I couldn't go 'Hey, you over there with the great furniture manufacturing business, would you mind making some of this for us'... I didn't have that option because there was no room. There was no space, and the small amount of manufacturing space that was in existence at that time was ...There was no way we could find a collaborative expert partner to work with, so we had to set up our own factory space, and that's massive! (SC27)

6.3.4 Central Government

Possibly the most consistent finding amongst participants was that the organisation created by central government to oversee the Christchurch recovery and rebuild, the Canterbury Earthquake

Recovery Authority (CERA) was an obstacle. Those who had dealings with the organisation found them, at best, unhelpful. A social entrepreneur expressed his anger by stating that *'Central government has been worse than you can possibly imagine to work with'* (S4). A business owner was initially hopeful. He expected greater support than he received:

'I went in quite optimistic... if I went in wanting what I wanted to achieve that I would get support, but I feel like that support doesn't exist. I'm definitely more jaded about dealing with organisations like CERA. (C8)

An artist believed the decision-making processes put into place were unfair and undemocratic:

It comes down to Gerry at the end. It comes down to one person at the end. I think for one site we had to have 20 signatures to get ownership of the site....or lease the site....and it came down to one person and then 'nah'. It's ridiculous if it comes down to one person and he doesn't like it. I don't like the thought of central government controlling Christchurch. (A21)

Others were frustrated by what they saw as a missed opportunity: *'From what I've seen of CERA and what their policies are I think there's been a golden opportunity missed to make Christchurch the most sustainable city in the world, and I'm really angry'*(SC22). A participant who oversaw a landscaping operation encountered many difficulties:

CERA were pretty useless to work with because they failed to make decisions for months and months and months. Particularly over access to sites, or they blocked access to sites. Or they negotiated access to sites and changed their minds after you'd started work. We had all those experiences. CERA was many-headed, difficult body to get decisions from, subject to political whim and possibly worse. Not a good partner and didn't understand volunteerism and community work....I'm pretty disappointed by CERA and I think it was because it was a central government creature, not a city council developed body. (S39)

The views of participants in relation to the obstacles presented by CERA's plans for the city's redevelopment were the most fervent and widely expressed across the sample. What participants widely viewed as CERA's overbearing and over controlling approach to the Christchurch rebuild seems symptomatic of an elite panic.

6.3.5 Elite Panic

As discussed in Chapter 2, elite panic is a response from those who enjoy a pre-disaster status quo and fear those who may take advantage of the situation to shift power (Clark & Chess, 2008). Creative ideas were widely viewed as beneficial in the earlier post-quake period, but became

seemingly less appreciated as people adapted and life in the city returned to a form of normality. Unique products and services once seen as ground-breaking and essential were now viewed as transitional, stop-gap measures, viewed differently and seemingly valued less. This was unsurprising to one participant: *'We were always transitional institutions'* (A43). Another, a prominent member of what was seen as a 'transitional movement' was aware of this and sceptical with regard to there being any longer term benefits:

We've discovered a way to take some power, but it's all very unofficial...borrowing everything. We don't actually own anything at the end of the day. We haven't changed anything...any materials, or political situations. So if we have any long term influence on power it is just through changing people's thinking. (S4)

Christchurch was renowned amongst a range of participants as having something of an 'Old Boys' Network' that had power in the city. There was a sense that this group had loosened their grip to some extent, having been caught off guard and disorientated by the earthquakes. There was some feeling amongst the study sample that this had been an enabling factor in support of unique approaches. However, there was a perception that they were regrouping and that the opportunities to capitalise in a power vacuum were diminishing. A public artist expressed concern:

I think, especially in the city, people feel quite disenfranchised. There's a fair degree of that. One of the problems I have with the city is that it is owned by a very small number of people who seem to be driving everything. (A1)

Another participant suspected that the power of those who occupied traditionally long-respected business or family roles in the city had shifted, but was not lost: *'I think it is still present, the old boys' network. We just respond to it differently in Christchurch....it's still very powerful'* (S4). Another concurred, *'I think you've still got the old establishment who liked the city as it was and they'll work hard to maintain the status quo...'* (C8). What was seen to be emerging was seen to support more conventional or acceptable creativity:

I think I've seen with the reestablishment of things like The Piano and the Isaac Theatre Royal and those sort of venues, there's a gradual resurgence of the establishment and those sort of ...particularly arts culture of the city, which is much more cautious and much more self-regarding. I think that element is rebuilding itself, as it will. (S39)

Overall, there appeared to be a belief that an opportunity to be creative while those who preferred traditional approaches were 'not looking' had presented itself after the earthquakes, but that opportunity had diminished.

6.4 Summary

There is a variety of enabling as well as constricting factors throughout the data. The earthquakes created a unique and unknown environment. Loss and destruction had led to great need and consequently opportunities to meet that need. The participants in this study experienced and were stimulated by a spirit of recovery. The relaxation of rules due to authorities and organisations being caught off guard resulted in a power vacuum. Participants took the opportunity to fill that vacuum, aided by greater public acceptance that unconventional approaches can be satisfactory substitutes. Funding was available and many felt supported by local government, although they believed the situation was unlikely to last. Participants widely believed that central government and its regimented, exclusive plans for the city would leave little opportunity for creativity. The participant accounts presented in this chapter provide rich data to be read against what is known about what enables or hinders those implementing creative ideas in non-disaster settings. This will allow identification of how creative activity responds to the positive and negative forces that impact upon it in a situation of collective adversity. This will be a key focus in the discussion chapter.

Chapter 7

Discussion

7.1 Introduction

This chapter discusses the key findings from the study in relation to the research objectives. Firstly, research objective one: 'Identify and discuss the characteristics, influences and motivations of those who acted creatively in post-earthquake Christchurch' will be addressed. The discussion will traverse points of interest regarding the characteristics that indicate sub-groups of post-disaster creators and the impact of extraversion and agreeableness on the creative idea implementation process after a disaster. Then, discussion of personal influences and motivating factors will be presented. A modification of Amabile's (1996) Componential Model of Creativity will be outlined to highlight what was found in the data about the importance of "meaningful work" (Amabile & Pratt, 2016) as a catalyst for intrinsic motivation. It will be emphasised that Amabile's and Amabile and Pratt's componential models, in addition to Csikszentmihalyi's Systems Model (Fig 2.1), each present context as a key contributor to the creative process. Aspects of these models are supported by this study, although this discussion proposes that no existing model sufficiently explains the creative process seen after the Christchurch earthquake.

Discussion in relation to research objective two: 'Critically evaluate and provide a systematic account of the ways in which creative activity occurred in response to a situation of collective adversity' will begin in section 7.3. What the data suggest *happens to* creativity during the post-disaster period will be expanded on. As discussed in Chapter 2, by definition a creative product must be both novel and useful. What aspect is most valued after a disaster? A new model is presented to illustrate the shifting value of the two components of creativity after a disaster. The discussion then details 'elite panic', moderated by a supportive local government, which occurred in post-earthquake Christchurch. The impact of this and a return to 'normal' will also be discussed in relation to research objective two to determine how creativity was shaped by a situation of collective adversity. In order to help address research objective two a new model based on the findings has been created to provide a systematic account of the post-disaster creative process. The model illustrates how creative idea implementation leads to a form of creativity that is the result of a 'collision' between individuals prompted to act in an adverse setting and the social forces that emerge as a result of the physical context. The chapter concludes with discussion of the theoretical and practical implications of the main findings.

7.2 The Creators

This section of the chapter will address the first research objective by discussing findings that contribute to greater understanding of the individuals who chose to implement creative ideas after the earthquakes. The most commonly identified characteristics, external influences and motivating factors in the data will be analysed and discussed to provide a full account of what the creative individuals were like and what compelled them to act as they did in the setting.

7.2.1 When Risk is not a Risk

Comfort with risk-taking, the desire for a challenge and resilience to cope with the consequences of possible failure can be viewed as contributory factors in post-disaster creative idea implementation. The data reveal that participants were generally accepting of risk. This reflects what is known about creativity and risk. As George and Zhou (2007) have stated there are “risks inherent in creativity” (p.609). With this in mind, it may be unsurprising that participants widely viewed risk –and failure - as a necessary part of the creative process. Risk-taking may be such an accepted part of the process it is not viewed as risk, or at least not considered something that would prevent action.

Those who act on creative ideas tend not to be altered by a disaster with regard to risk. Monllor and Altay (2016) found fear of failure did not increase after a disaster. People are either accepting of risk or not, regardless of the setting. The post-earthquakes setting did not appear to exacerbate or lead to any fear of failure or risk over and above that which may be expected in a non-disaster setting. In fact, the opposite may be true. Supportive efforts were almost certainly likely to alleviate problems in the post-disaster situation, so there was little to fear. Study participants were also aware of, yet undeterred by, the knowledge that they may experience discomfort if their idea was criticised. This was also viewed as part of the necessary path to achievement. Even commercial entrepreneurs, with potentially more at stake and who did claim to consider risks more carefully at the outset, were more likely to consider contingencies than abandonment.

Therefore, it seems the physical destruction does not instil a fear of implementing creative ideas. In fact, creativity can be more ‘safely’ implemented as destruction leads to an increase in demand and encouragement of creativity. Further, it was common for participants to state or suggest that the prospect of risk (financial, social or personal) and failure (inability to achieve popular engagement) made creative idea implementation more interesting and exciting due to the unpredictability involved. Perhaps some even began to lose interest and momentum for pursuing creative ideas as the recovery progressed and the prospect of risk waned. When an objective had been met, or a project completed, another novel or more difficult task would beckon. The earthquakes created another level of difficulty for those who enjoyed the prospect of greater

challenge. This is likely to have created momentum during the early stages of the idea implementation, but – as mentioned – as risk reduced, so did the challenge and consequently, also the enthusiasm to ‘maintain’ and develop a venture once challenges had been met and risks overcome.

7.2.2 Well-Supported

While the findings identified commonalities in the backgrounds and influences of participants to address objective one, it was notable that no participants reported feeling unsupported. Most had spouses, family or friends who had offered material and emotional support throughout their lives. The results provide strong evidence for a majority of this study’s sample being raised in loving families and experiencing not just general and satisfactory financial support but also support for their creativity. This aspect of their development can be viewed as a contributory factor in their willingness to act creatively after the earthquakes. Past experience had shown them that not only was it acceptable to act creatively, but that if goals were not achieved they may not be shunned or ridiculed. They could create with a sense of psychological safety, known to be important, regardless of the outcome (Hennessey & Amabile, 2010). However, it could be speculated that this allowed some to adopt a more blasé or fatalistic attitude towards whatever outcome resulted. If it did not work it was because failure had always been a realistic possibility. Besides, if failure eventuated they were unlikely to suffer emotionally, or financially. Those interviewed were commonly from, at least, financially comfortable backgrounds with families prone to assist. This aligns with previous research. For instance, as discussed in Chapter 2, Bell et al. (2016) found that creative individuals – specifically inventors – were more likely to have had entrepreneurial or aspirational parents with higher incomes, than to have been raised in a lower income family.

7.2.3 Parental Influence

Another common contributor to the personalities of those interviewed were parents who imparted strong social and environmental values. These values were appreciated and echoed by their offspring. Older parents of those interviewed were unlikely to have been as exposed to the now commonly touted need for more socially enlightened attitudes, and for the sustenance and preservation of environmental resources. Therefore, it is suggested that many of this study’s participants were the products of those prepared to have socially progressive views and impart them. The data reveal a link between these parents and those who felt both compelled and unafraid to act in support of their – and their parents’ - values after a disaster. Cialdini and Trost (1998) and Janoski and Wilson (1995) found links between less conventional parents, or those who demonstrate a strong social conscience, and offspring willing and empowered to create or act on their beliefs for common good. The findings of this study also concur with those of Kwasniewska et al. (2018) who

identified that parental engagement, behaviour and attitudes can foster a climate in which it feels comfortable for children to create.

Non-creative parents could also be influential. Although only a small number of participants mentioned 'boring' or uncreative parents, with lives or lifestyles they did not wish to emulate, it does demonstrate that creative individuals may be motivated in this way.

Supporting the findings of Eesley and Wang (2017), entrepreneurial parents also were influential. However, it seems noteworthy that, with few exceptions, any entrepreneurial parental figure was male. It was also notable that a significant number of participants talked of their mothers having a supporting role in the family business or household. While it was common for those interviewed to speak highly of a much-valued mother's support and contribution to the family, very few spoke of having a mother who strove for independent goals. This was perhaps unsurprising when mentioned by older participants, whose mothers would have been largely bound by social conventions of an earlier era (Dolan, 2016). However, it was also the case for younger participants whose mothers - as personally-experienced social history leads me to suggest - would not have been subjected to such limitations. Just over one half of the study sample were female, therefore daughters of mothers who had been content with a more traditional role were not deterred from making more dynamic choices for themselves. They were unafraid to play a dominant role in creative idea implementation in the uncertain Christchurch setting. While parental support and acceptance seems important as a contributory factor to the character of those willing to act creatively after a disaster, gender role modelling does not. However, this indicates an opportunity for further exploration. Gathering data from individuals who claimed to have a 'creative' mother and a father who was 'supportive' could further enhance understanding of how parental gender roles influence individual creativity.

7.2.4 Educational Influences

Both negative and positive educational influences were extracted from the data. Of most significance are the clear indications of intelligence. Firstly, the majority of the sample had at least *attended* a tertiary institution, with most graduating with the minimum of a Bachelor's degree. This suggests a high level of knowledge and, likely, intelligence. Attending university was much less commonplace than it has become in recent decades (*Profile & Trends 2011: New Zealand's Tertiary Education Sector*, 2019). It seems quite likely that those who attended were encouraged to do so based on academic potential, perhaps critical thinking ability or an inquiring mind, rather than as a matter of course. As mentioned in Chapter 2, research has associated high intelligence with creativity (Sternberg & Lubart, 1995) as well as with the ability to direct an excess of sensory responses, allowed by lower levels of latent inhibition (LI), towards producing beneficial creative output (Carson, Peterson & Higgins, 2003).

Intelligence aside, participants readily relayed accounts of potentially influential experiences during their secondary schooling, rather than their tertiary education. Those who found school difficult reported that conventional approaches and traditional school cultures did not foster their uniqueness or creativity. This complaint was more regularly mentioned by male participants. This supports what researchers have reported regarding difficulties experienced by unconventional people who attend highly conventional or traditional schools (Mellou, 1996). Although some suffered within such environments, their responses tended to indicate an awareness of why this occurred. Most appeared philosophical and claimed that they were not especially negatively affected by the experiences. They understood themselves as being at odds with a conventional system. In fact, responses suggest some were proud to be 'other' in a traditional setting. They could now recognise conventional settings, and those who championed them, as flawed. As adults some have found joy in challenging the validity of expected behaviour. This is interesting in connection with other positive influences recalled by participants. These include being encouraged to think critically by passionate teachers who treated them like intelligent adults. These teachers gave licence to question the status quo. Others who liked to create uniquely, or just felt 'different', appreciated teachers who took the time to understand them. The teachers who enjoyed and celebrated interesting aspects of their character, special talents or interests were fondly recalled. They had allowed them to feel validated in what could seem like a hostile world of ordinariness. As implementing a creative idea is the opposite of expected behaviour, those who struggled at a conventional school may find a disaster zone, in which expected behaviour was difficult to ascertain, paradoxically comforting. As will be discussed further in relation to the direct impact of the earthquake-generated setting, a relaxation of rules and the inability to maintain aspects of the conventional system provided an opportunity for those more comfortable in a flexible environment to act according to their own rules. Operating within an alien system was something some participants would have had the opportunity to practise while a school student. This may have been advantageous as a post-disaster creative idea implementer.

7.2.5 Few Surprises – so what?

Much of this discussion regarding the characteristics and backgrounds of participants is confirmatory with regards to what has been understood in the literature about creative individuals. Comfort with risk-taking (Shane, 2003; Fillis & Rentschler, 2010), a desire for a challenge (Pannells & Caxton, 2008), family support (Rogers, 1959; Harrington, Block & Block, 1987), parental role modelling of values and entrepreneurship (Eesley & Wang, 2017), and the experience of angst when at odds with a conventional school system (Mellou, 1996) are all known antecedents for creativity. That these participants took the opportunity to create in this setting is, perhaps, unsurprising. However, this research adds knowledge as it is now known that individuals with such characteristics are inclined

and prepared to adapt their skills to a distinctive type of creativity instigated by the earthquake; a type with usefulness being of primary importance.

7.2.6 Pre-adapted Post-disaster creators

In terms of characteristics, participants predominantly belonged to one of two groups. Each could generally be classed as either a 'Free Thinker' or an 'Opportunist'. Members of both groups displayed characteristics that suggest they were somewhat pre-adapted to create in the post-disaster setting. I suggest the study sample consisted of broadly equal numbers of 'Free Thinkers' and 'Opportunists'. However, some participants could be considered both a 'Free Thinker' and an 'Opportunist'.

'Free Thinkers'

In terms of this research, the term 'Free Thinker' means individuals who behave or think alternatively, often shunning traditional or social norms. They may equally be known as 'outsiders' or 'non-conformists'. However, those words carry unnecessary and unintended negative connotations. The degree to which those considered 'Free Thinkers' shun social norms varies. For some it was overt. Perhaps they choose to dress in a bohemian fashion, or, for example, be an elderly man who is happy for his long, grey hair to fall across the shoulders of his classic business suit (C30). Others may be more 'Free Thinkers' in their non-traditional attitudes than in the way they present.

It is of interest that more than three quarters of the participant group expressed their wish to contribute to society in order to improve on what they, then, viewed its current state to be. This suggests they were dissatisfied or uncomfortable with the status quo, or at least the pre-earthquakes status quo. The post-earthquakes situation was one involving adversity; it may follow that being accustomed to adverse situations allowed some participants the ability to act more swiftly and effectively in the unstable post-disaster context (Cameron, Montgomery, Moore & Stewart, 2018).

It is known that it is common to want to be like others, even to imitate them. To do so is often a "swift and mindless" decision in order to avoid dislike or ridicule (Griskevicius et al., 2006, p.282). Uniqueness attracts attention (Cialdini & Trost, 1998). However, there are those who do not view this negatively. The norms of a particular social or cultural group dictate what is accepted or ridiculed (Griskevicius et al, 2006). In the case of those referred to as 'Free Thinkers' in this study, to be unconventional is an accepted norm of any group whose members share similar characteristics.

Kaufman (2014) has suggested that creativity can be fuelled by social rejection. It can be borne of the tension created by adverse social events. Therefore, it follows that creativity is a natural response to tension. In a post-disaster setting the internal tension experienced by an individual may combine with the tension in the post-disaster social, political, economic, and cultural environments to enhance creativity. It is known that creativity is associated both with sensitive qualities, perhaps

proneness to anxiety and depression, and with dynamic ones like enjoyment of risk taking and challenge seeking (Csikszentmihalyi, 1996; Feist, 2010). I propose that many of those, particularly the 'Free Thinkers' in the study, were adept at living in a society that was often at odds with their world view or chosen approaches. When disaster strikes there is a diminution of 'social rejection' due to an altered physical and social environment. There may be several reasons for this including that the newly configured setting is not only interesting but presents possibilities not previously available to those who think and act differently. It is now those who enjoy a traditional and conventional life who are at odds with their environment. This may give 'Free Thinkers' a sense of power. Odd feels 'good'. It feels normal. They are ready to act, while others mourn the disappearance of their comfortable existence, and wait for others to 'do something' to encourage its return. In such a setting, 'Free Thinkers' begin to activate creative ideas. Creativity changes from being spurred by social disapproval to, instead, stemming from a position of social strength. This shows that after a disaster the causation of creative idea implementation is 'flipped'. Prior to the earthquakes they had already demonstrated a willingness "to follow a difficult path" (Sternberg & Lubart, 1995, p.3). 'Free Thinkers' are pre-adapted to adversity and they take the opportunity to enjoy a release of tension, while others experience an increase. This personal advantage can be considered a contributory factor to creative idea implementation in Christchurch after the earthquakes.

'Opportunists'

The other sub-group identified in the data are the 'Opportunists'. In this study sample, those considered to be 'Opportunists' were generally commercial entrepreneurs. This group included a higher proportion of those who were less overtly creative, or felt 'forced' into implementing creative ideas by the social and economic processes that evolved after the earthquake left few alternatives. They were more experienced at implementing creative ideas, more considered in their actions, tended to have at least some drive for financial success, and were more adaptable and confident within themselves. They were also more assertive leaders and more willing to work alone than the 'Free Thinkers' who preferred to work with others. 'Opportunists' may also suffer from emotional or mental stress, but this is less likely to restrain their activity, regardless of the setting. Much of what is discussed in the previous section with regard to non-conformity and 'otherness' applies to both groups. Like the 'Free Thinkers', 'Opportunists' were pre-adapted to operate effectively in an unstable setting, but for different reasons. They, too, were comfortable with uncertainty, and relished risk. Seeking and exploiting opportunities is a 'way of life' for 'Opportunists'. The disaster merely made more opportunities available. Those astute and practised at exploiting them were quickly able to take advantage of the precarious situation. Like the 'Free Thinkers', the 'Opportunists' were also personally advantaged as they could rely on their experience along with their ability to

identify and capitalise on opportunities to provide benefits for themselves and others via creative means after the earthquakes.

Identifying 'Opportunists' amongst the sample suggests reason for both optimism and concern regarding prolonging the benefits of post-disaster creativity. The data reveal that 'Opportunists' who implement creative ideas after a disaster appear to possess the skills necessary to establish successful ventures. They possess skills and knowledge gained during relevant experiences operating in more rigorously regulated non-disaster settings. A reduction in bureaucratic obstacles means they are less prevented from successfully implementing and sustaining their creative ideas. Yet, the data suggest that 'Opportunists' tend to have elevated – or necessary – commercial expectations. If a creative idea fails to be sustainable - or to present a challenge - an 'Opportunist' may abandon further development of an implemented novel idea. They may, instead, seek opportunities to implement creativity they believe will be perceived as more 'useful' in a recovered setting to gain both popular engagement and personal fulfilment.

Perhaps ironically, in abandoning one creative idea that was intended to, at least to an extent, meet prosocial needs prompted by a disaster, new needs of a recovering community may be attended to. Harnessing creative 'Opportunists' desire to seek and exploit opportunities to be effective in their communities – for personal or prosocial reasons – may enable wider reaching and more prolonged benefits. Although not all creative ideas implemented post-disaster are intended or expected to be sustained beyond the initial recovery period, perhaps the 'responsibility' to prolong benefits lies with creative 'Opportunists'. While 'Free Thinkers', who may be more directly motivated to serve their community, tend to become demotivated as post-disaster need is alleviated, 'Opportunists' retain their motivation. The benefits brought about by the implementation of creative ideas after a disaster – heightened community engagement, encouragement and support for visionary approaches, less rigidity of attitudes and intolerance, surprising personal, social and economic advantages – may be extended by 'Opportunists'. Once the originally implemented ideas have served a purpose, they could aim to meet the challenge to not 'throw out the good with the bad' and evolve and adapt their ideas to meet changing needs. 'Opportunists' could find new creative challenges while retaining the essence of the original idea.

There does appear to be another advantage for 'Opportunists' – and 'Free Thinkers' – after a disaster, particularly those who are less extroverted and may have needed to draw on extraversion to persuade others that a need existed during the establishment of *pre*-earthquake ventures (Shane, 2003; Fillis & Rentschler, 2010). After a disaster it appears extraversion is not essential for successful creative idea implementation.

7.2.7 Extraversion not required

Knowledge gathered to address research objective one has been procured from both the interviews and the TIPI survey results (Appendix C). Analysis of the TIPI data, in particular, revealed an important finding that deviates from what researchers have previously found regarding the importance of extraversion in creative venture implementation. A search for literature that specifically associated those who implement creative ideas and extraversion centred on the entrepreneurship literature. Consequently, it was research from that field against which the findings of this study pertaining to extraversion were read. Although not necessarily encompassing all creative people, those who choose to *implement creative ideas* in non-disaster settings within their communities, or wider society, tend to be socially confident. They are enthusiastic extraverts who possess the skills believed required to convince others that their ideas have value and should be pursued (Petrikova & Sorokova, 2016). Past research that views extraversion as valuable, even essential, during the early phases of a creative venture is plentiful (Leutner, Ahmetoglu, Akhtar, & Chamorro-Premuzic, 2014; Shane, 2003; Fillis & Rentschler, 2010; Liang, Peng, Yao, & Liang, 2015). Extraverts are energetic, sociable, assertive and emotionally positive. They readily engage with the material and social worlds (Kerr et al., 2017). Extraversion is seen as necessary because “entrepreneurs frequently must vie against established organizations that have more resources” and “must capture trade from rivals” (Miller, 2015, p. 1). However, the data suggest that those who implement creative ideas in a post-disaster setting need not possess extraversion⁴. This is likely because the unusual circumstances result in other factors that prompt enthusiasm and willingness to embrace creative options. The need to act quickly to adapt, or a shared infectious nervous energy brought about by the novelty of the situation, may lead to an enthusiastic embracing of any option that enables adjustment or provides distraction (Cameron et al., 2018). Therefore, the data from this study does not support a necessity for extraversion because those operating in a post-disaster setting have less need for the characteristic due to creative products being already in high demand.

The fact that extraversion is not required during post-disaster creative idea implementation is evident in the data. Although a reasonable proportion of the participants identified as either moderately or strongly extroverted, almost half agreed to only being ‘a little’ extroverted, or less.

Therefore, although extraversion is still a component of the personality of a significant proportion of those interviewed, the data reveal it is not an essential requirement for creative idea implementation after a disaster. Interestingly, many participants demonstrated adaptability, particularly social adaptability, as discussed in Chapter 2 in relation to the work of Baron and Markman (2003). Perhaps

⁴ There seemed little distinction between ‘Free Thinkers’ and ‘Opportunists’, on this dimension, perhaps because a participant could share the qualities of both, particularly those who could be considered an Opportunist.

being able to get along and collaborate with others for a similar cause compensates for a lack of extraversion. That is, *if* the powers of persuasion were required for successful creative idea implementation. Safety, or power, in numbers could be an important factor if others needed to be convinced to support a creative venture.

An excess of opportunities to use creative approaches as an immediate remedy for what was damaged or lost, and the demand for such actions, could have led to those prone to introversion having little difficulty, or need, to persuade others to support their activity. They had less need to rely on extraversion. The physical and social environment – full of need created by the earthquakes did this work for them. The unpredictable and unprecedented nature of the post-disaster context resulted in adaptation tailored to meet needs presented by the earthquakes. Ideas tended to be quickly accepted as time was ‘of the essence’ and available alternatives limited or non-existent. Urgency may have lessened the need for extraversion, especially in the initial post-disaster period. As one participant commented, it was the case of *“necessity being the mother of invention”* (C07). In addition, funding was readily available to re-establish a sense of well-being and optimism, as was support from members of the community. Limited convincing was required to acquire this assistance, a situation that would have suited the more introverted of creative idea implementers. As discussed by Cameron et al. (2018) in relation to this study, it was found that success in the early post-disaster period *“had to do with the initial energy and the money that council, especially, were putting in...”* (AC43).

It could be speculated that as time progressed from the initial major seismic events that the generosity of both the time-stretched Council and volunteers waned. According to study participants, this proved to be the case. Increased and sustained effort would be required if creative products or services, largely propelled by post-disaster energy and abundant opportunity, are to survive into the later recovery period or beyond. Therefore, those who lacked extraversion were perhaps more likely to have become dispirited or demotivated by the eventual need to draw on a personal characteristic that compelled them to energetically engage with others; a characteristic they may not have had. Nevertheless, a reduced need for extraversion contributed to a proliferation of creative idea implementation after the earthquakes as it allowed more introverted creators the opportunity to capitalise on their creativity without the discomfort of behaving contrary to their natural disposition. This is interesting in terms of understanding the characteristics of those who act creatively after a disaster as it widens ‘the playing field’ at a time when there is ample opportunity to ‘play’.

The knowledge that creative idea implementation may not require extraversion after a disaster could encourage those less extroverted to implement novel ideas after a shock event in non-disaster settings. For instance, sudden changes in a business or family’s fortune may require input from those

with creative ideas that could alleviate the loss of previous options. If alternatives are limited, knowing there is reduced need to 'sell' creative ideas may encourage less extroverted individuals to present or implement ideas in relative psychological comfort. However, ultimately 'winning the game' may be thwarted by an excess of another characteristic.

7.2.8 Too Agreeable

The characteristic of agreeableness appears to play a critical role in the way post-disaster creativity proceeds. Again, principally with reference to the findings of the TIPI survey, participants claimed to have relatively high levels of sympathy and warmth. Almost two-thirds of participants declared themselves to be either moderately or strongly sympathetic or warm. Studies, including those of Mooradian, Davis and Matzler (2011) and Graziano, Habashi, Sheese and Tobin (2007) link sympathy and agreeableness. The former have stated that being agreeable indicates "a prosocial and communal orientation toward others" and "includes traits such as altruism, tender-mindedness, trust and modesty" (2011, p.101). Those who are sympathetic are tender-minded. Past literature that associates agreeableness with creative idea implementation has not commonly identified it as conducive to exploiting ideas (Kerr et al., 2017; Obschonka & Stuetzer, 2017). Courtesy, flexibility and tolerance are characteristics associated with agreeableness. So, too, are being trusting, good-natured, soft-hearted and tolerant (Barrick & Mount, 1991). According to Shane (2003), agreeable people are not as likely as others to exploit opportunities. The data from this study do not support this belief. The majority – two thirds - of participants were primarily motivated by a desire to bring benefits to others in the post-disaster setting. This demonstrates agreeableness. The fact that they were delivering benefits by initiating predominantly pro-socially inspired events and ventures made their creativity popular and acceptable in the context. The community were generally supportive and endorsed unique ventures and activities. The wide acceptance of their actions consequently reinforced the comfort of agreeable creative idea implementers.

Acting in accordance with their values and social conscience was more important than achieving personal wealth or other material goals. However, once prosocial goals were met the desire to persevere seemed to wane for those without commercial goals. Although it can be argued that the characteristic of agreeableness contributed to their decision to implement a creative idea, it is likely that it detracted from the potential longevity of some of the participants' creative ideas. This was probably particularly so if they lacked the extraversion to enjoy promoting products or services for which there was no longer an urgent requirement.

7.3 Motivation

As discussed in Chapter 2, motivation is considered an important component of the creative process (Amabile, 1996). Both intrinsic (acting for inherent interest or enjoyment) and extrinsic (acting in pursuit of a separable outcome) motivations prompted participants to act (Ryan & Deci, 2000). Yet what appears of most interest is that many who were initially extrinsically motivated became intrinsically motivated during the implementation process. Intrinsic and extrinsic motives are discussed, as is how one may become the other, in the following sections. This knowledge contributes to research objective one. Understanding the specific motivations of those who acted creatively after the earthquakes contributes to greater comprehension of these actors complexities.

7.3.1 Intrinsic motives

Most who spoke of feeling intrinsically motivated by the creative activity itself were artists. It was common for those participants to speak of feeling compelled to create. Some spoke of the joy of making something from nothing being its own reward. Artwork played a role in brightening the desolate cityscape, providing a distraction and amusement. There was also a strong sense of autonomy. There were few restrictions to prevent them creating in accordance with their own preferences and skills. This allowed them to feel autonomous and masterful. Participants reported feeling connected (relatedness) to their community. Self-Determination Theory (Ryan & Deci, 2000), which is known to prompt intrinsic motivation, is illustrated by their process.

Researchers have proposed and promoted the significance of intrinsic motivation to the creative process (Hennessey & Amabile, 1998; Ryan & Deci, 2000; Shin & Zhou, 2003 & Prabhu, Sutton & Sauser, 2008). However, the necessity and the superiority of intrinsic to the importance of extrinsic motives is not confirmed by this study. In fact, the opposite may be more accurate in a post-disaster setting. Those eager to create for community benefit are thinking less about creating for their own enjoyment than meeting the multitude of needs of others. The needs, and evidence of their satisfaction, act as external prompts - i.e., as extrinsic motivators. Alleviating the stress of others may or may not result in gaining enjoyment or personal satisfaction in the process. This can be viewed as a feature of the distinctive type of creativity seen after a disaster. This type of creativity is specifically instigated by social responses to the setting. If there was not the need to alleviate disaster-related problems creative idea implementers would likely feel more at liberty to indulge in creative activities that pleased them personally. After a disaster what appears to please creators personally is applying creativity with pro-social intent. This is not to say they do not enjoy what they create, or that it is not influenced by personal preferences and skills, but the intrinsic motivation originates from a desire to do meaningful work and, often, work that will be acknowledged as having contributed to the dominant need in the community. Creating without considering the wider needs of others would

have seemed inappropriate to most of those interviewed and consequently detracted from their enjoyment, felt uncomfortably disagreeable and been likely to have limited intrinsic motivation.

7.3.2 Extrinsic motives

Although a minority, some participants stated that the potential for material, or self-serving external rewards was a driving factor in their creative activity. Ego boost, recognition, personal development and money were sought by some. Participants admitted to being ego-driven to an extent. This was generally justified as a distinctly human trait, perhaps most prominent in artists and performers: “I think we all like some sort of significance, and some sort of recognition” (A1). The post-disaster setting in Christchurch provided the opportunity to be recognised. The community was appreciative of the efforts made by those willing to be creative for the wider good. In the absence of news related to ‘business as usual’, and as a much-needed contrast to the tales of destruction and trauma that dominated media and conversation, a stage on which to perform was available and inviting for some.

Many of those interviewed also said they were motivated by the opportunity for personal development and the chance to meet like-minded people or make friends. This is perhaps a desired and pleasurable by-product of any venture involving others. No participant suggested meeting others or making friends was a primary driver. However, there was considerable mention of a need to make life more meaningful. In addition to the chance to be effective, participants also had the opportunity to develop personally and emotionally through the experience.

Another motivating factor mentioned by a range of those interviewed, perhaps also unsurprising, is that they were motivated by the need to have something to do after the earthquakes. Some could no longer continue with what had occupied their working days prior to the disaster. There were those who had been made redundant, while others awaited assessment and notifications regarding their positions and work premises. What is significant is that the sudden lack of occupation experienced by some became a driving force directly resulting from the disaster.

It was only commercial entrepreneurs in the research who claimed financial goals motivated them. In fact, most in this domain saw little sense in applying creativity without the possibility of capitalising on the implemented idea. However, as indicated by their being included in the sample, the commercial entrepreneurs were not solely – or even predominantly – motivated by wealth enhancement. In fact, few overtly declared this motive. When questioned, they insisted it was secondary to other goals. Some participants were openly uncomfortable with the possibility of potential personal financial gain; particularly social entrepreneurs.

There have been strong advocates for the power of extrinsic motivation in the creative process (Eisenberger & Cameron, 1996 & Cameron & Pierce, 2004). However, those who have given greater

emphasis to intrinsic motivation believe extrinsic motivation cannot be sustained to prolong effectiveness. External rewards are known to motivate effectively in the initial stages of a venture, but once goals have been achieved and rewards received motivation may be difficult to maintain if there is a lack of enjoyment in the experience itself. This may be due to a loss of 'relatedness', a key component of Ryan and Deci's 'Self Determination Theory' (2000) (Fig.2.4) along with 'autonomy' and 'competence' (Deci & Moller, 2005). The data of this study demonstrate this may be the case. Once extrinsic goals have been achieved after a disaster – community issues addressed, recognition is achieved – the feeling of connectedness enjoyed while working with others for a co-relatable cause diminishes. In fact, they may begin to feel disconnection once a cause they co-related to with others no longer exists. In some cases, what has been strived for can result in negative emotions and experiences. For instance, it becomes tiresome encouraging others to continually support the project, or recognition attracts criticism, which adds to the creator's own negative attitude and disinclination to continue with activity that is no longer well-received.

Maintaining a desire for capital growth, when it is forthcoming, appears to be the most enduring motivational force. This was apparent in, predominantly, the commercial entrepreneurs in the study sample whose creative ventures had remained, at least, financially sustainable. Therefore, a lack of external motivation for financial success can be viewed as a concern (if the venture was one perceived and intended to serve a purpose beyond the initial post-disaster period) as it threatens the potential benefits of creative idea implementation over a longer term. In addition, regarding the importance of financing, aside from artists who were compelled to work regardless, social entrepreneurs and other not-for-profit creators became increasingly discouraged as available funding was reduced.

As demand for post-earthquake substitutes and creative approaches waned a motivational vacuum was created in those whose goal was to aid the community. If a desire for financial reward did not exist then such rewards could not maintain a venture. These findings help suggest why the benefits of some creative ideas implemented after the earthquakes that became unsustainable were not maximised.

7.3.3 Predominance of prosocial motives

As already indicated in different findings, one of the key findings of this study is that the majority of those interviewed claimed prosocial reasons as a primary motivation. It follows that the participants' creativity resulted in output intended to bring benefit to the community and solve problems that arose due to the earthquake. Prosocial motives were aligned with individuals' desire to create in the setting that required adaptation and alternatives for what had been damaged or destroyed. This was the type of creative output that emerged when characteristically creative individuals' responded to

the social processes that emerged following the earthquake. The spirit of recovery - an enhanced community spirit and comradery – was the most immediate social process to occur, particularly after the most devastating event on 21 February, 2011. This spirit prompted greater awareness of the plight and needs of others and desire to be of service to those who were sharing in the experience of uncertainty brought about the events.

Those commercially driven or attempting to satisfy a personal need were also motivated by a desire to bring benefits to their wider community. Creative adaptation may have ultimately benefitted commercial enterprises, allowing them to establish or continue. However, without their vibrancy and available options, a sense of life ‘going on’ may not have ensued. Everybody ‘won’. Creative ventures provided distraction, amusement and a sense of how things were before the disaster.

There were others who did not act entirely altruistically, despite prosocial motivations. It was common for participants to speak of engagement with the community. If they engaged others they could encourage them to see things the way they did, perhaps highlight a need or an enlightened, socially-focused way of behaving. For instance, one participant wanted people to enjoy and celebrate local produce (SC14). Others enjoyed the experience of converting others to a more active way of life so the individuals involved could reap the health benefits (C13, C17). Artists hoped to communicate ideas while paying tribute to the broken city (A1, A37) or provide emotional therapy (A41). Each felt that engaging others would prompt thinking and feeling which could result in social benefit for individuals or their wider community.

Interestingly, despite those pro-socially motivated indicating a desire to make long term changes, they became demotivated. Why did this occur? The demotivation could be attributed to the loss of relevance of their actions - i.e., there is less immediate need for what they are contributing within the post-disaster context, as discussed in the previous section. Or, in the case of younger participants, it could also be attributed to ‘stage-of-life’ factors. Approximately a third of those interviewed were young adults who found themselves available and inspired after the earthquakes, perhaps by involvement with the Student Volunteer Army or other volunteer organisations and social enterprises mentioned in the findings. Once the post-disaster society had stabilised, and places of work and education were functioning and safe to return to, younger people reacquainted themselves with the original path they were travelling. However, these participants regularly mentioned feeling altered and intent on continuing to contribute to their communities in the future. This intent appeared genuine and is supported by Nissen (2017) who found the concept of creative pragmatism prevalent amongst students in this country. She stated:

A particular form of political agency is emerging among New Zealand students that can be synthesised and understood through a concept of ‘creative pragmatism’. Creative pragmatism

is a term advanced here to describe a 'realistic' orientation among students towards their social world. (2017, p.2)

It appears that the social recognition of the relevance and importance of the activity must be maintained if motivation is to be maintained.

7.3.4 Role of 'meaningful work'

While initially reflecting on the data it seemed surprising that so few intrinsic motives were reported by study participants given its perceived significance in the creativity literature (Amabile, 1996; Csikzentmihalyi; 1999). As this was confusing, contact was made with the creator of the componential model, Teresa Amabile, who supplied a then-current working paper directly addressing the issue. The paper included an updated model, the Dynamic Componential Model of Creativity (Fig. 2.4) (Amabile & Pratt, 2016). The model is built on Amabile's earlier work (1996). Like the earlier componential model it features the components of motivation, domain relevant skills and individual creativity skills. These act on the various stages of the creative process. Enhanced affect triggered by 'meaningful work' directly impacts on the creativity skills and motivation components of the model. Work that began as extrinsically motivated becomes intrinsic as the 'meaningful work progress loop' progresses. Amabile & Pratt (2016) found that 'meaningful work' can enhance motivation by affecting the dynamic nature of the process.

Not all work is pleasant. For instance, implementing an untested idea in a physically and socially unstable post-disaster setting would almost certainly not provide constant enjoyment. The completion of unpleasant tasks is unlikely inherently to generate the joy needed to trigger intrinsic motivation. However, acting on unique ideas to meet prosocial goals – regardless of the requirements - can result in enjoyment. A sense of achievement, recognition or working alongside others for a common goal could all prompt joy, and in turn the intrinsic motivation creative idea implementers need to persevere. According to the data, this appears to be how motivation was sustained in the initial post-disaster years, while need was still high. The importance of pro-socially motivated external goals, overrode the need to be intrinsically motivated from the outset. This is supported by earlier work of Grant and Berry (2011) who highlighted the importance of prosocial motivation that provided impetus for Amabile & Pratt's (2016) revised Dynamic Componential model (Fig 2.4). Therefore, in situations of collective adversity, benefits can be extended by the triggering of intrinsic motivation in those whose creative actions reap meaningful rewards for themselves and others.

Interestingly, this suggests that the motivation experienced intrinsically is linked more to the pro-sociality of the individual than their creativity. Although meeting prosocial needs can be viewed as an

external goal, the motivation to meet these goals could be considered intrinsic. It is possible that the applied creativity is an extrinsically motivated means to the end goal of being effective in a disaster-afflicted community.

7.4 Novelty vs Usefulness – what happens to creativity?

While it was found that personal and contextual factors not only impacted on, but also instigated, how creativity proceeded, it was also found that the way creativity was viewed shifted in the post-disaster period; twice. Feist (1998), Runco and Jaeger, (2012) and Amabile and Pillemer (2012) have reached a near consensus that the definition of creativity is one that involves two components. That is, in order for something to be considered creative it must be both novel and useful; appropriate for a purpose. As discussed in Chapter 2.1, all participants of this study implemented an idea, product or service that could be considered creative according to this definition, at least to a degree ⁵. As shown in a new model (Fig. 7.1), what appears to occur is that the value of both novelty and usefulness shifts during the post-disaster period. The usefulness component of creativity is seemingly more highly valued in non-disaster periods.

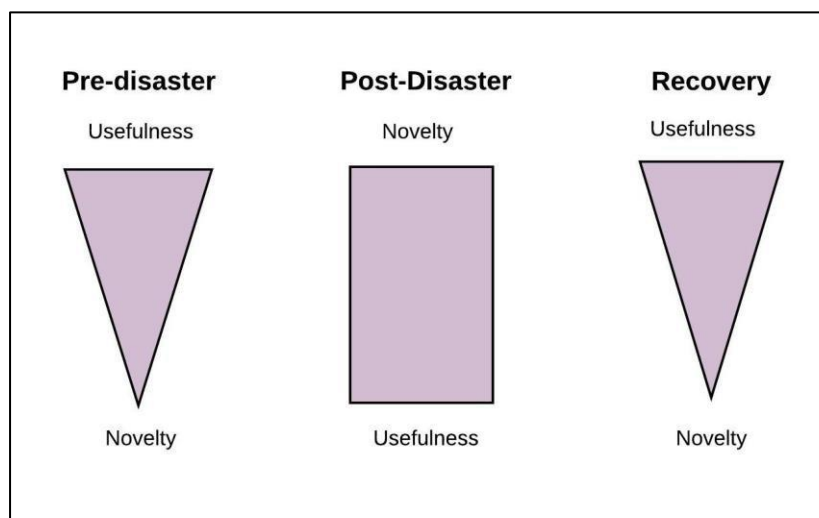


Figure 7.1 Creative Novelty Value Shift Model

Novelty is more highly valued after a disaster, particularly in the initial post-disaster period. Or rather, novelty is more highly valued because it becomes more useful in response to the social processes that occur within such a setting. Perhaps paradoxically – or at least in a way that blurs the dual criteria definition of creativity – what comes to be seen as *useful* in a post-disaster setting is *novelty* itself. Novelty at least became more widely accepted, and quirky options more tolerated, as

⁵ Kaufmann's (2003) typology was used to categorise the participants' creativity by degrees. While all output can be considered creative – it was both novel and useful – some can be more accurately classed as adaptation. See Appendix A.

unusual options and creations provided useful replacements for products or services that had been either lost or were unavailable. Novelty was also a useful amusement or distraction and an important sign of life and collective motivation. Creative ventures allowed people to enjoy themselves in the damaged city. Such efforts reinforced community spirit and the ability to see that all was not lost. This was also useful to those in authority who were yet to re-stabilise. If business people were finding novel alternatives and grass roots groups were helping to amass social capital there was less for local or central government to concern themselves with. Creative people filled many vacant social and physical gaps. The novelty was widely accepted as part of the 'new normal'. For instance, in Christchurch a loss of venues meant people were happy to accept and embrace attending gatherings in a pavilion made from wooden pallets (Fig. 7.2).

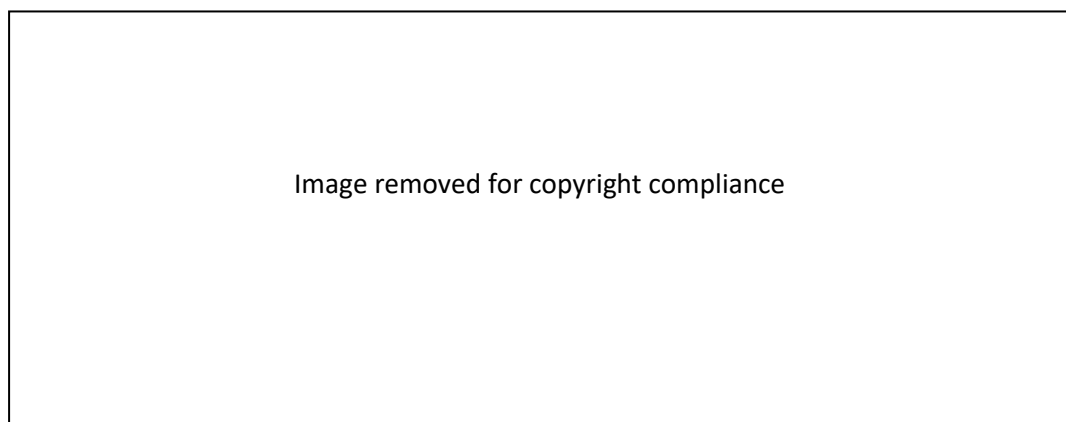


Figure 7.2 A Gap Filler initiative, the 'Pallet Pavilion', an outdoor venue for gatherings made from recycled wooden pallets.

They were prepared to share premises and work alongside competitors, buy their coffee from a shipping container amongst landscaped rubble, their lunch from a chef operating a pizza oven in a public park, or admire both publicly-owned and unauthorised artworks displayed on the side of concrete buildings. Unique creations added a positive aspect to the city's identity - an 'upside' to the earthquakes and light-heartedness that provided some stress relief for the creative idea implementers and those their actions benefitted. Once creative ideas were implemented, and seen to be satisfactory remedies, a snowball effect occurred. More people seemed willing to accept alternatives to conventional options. Creativity could be 'fun', especially as it offset the devastation and instability experienced by almost everyone in the community to some degree. The high value of

novelty was capitalised on as creative ideas became 'weirder' and more focused on entertainment than practical necessity. Borrowing a book from a fridge on a demolition site, dancing to music from an adapted washing machine in public, admiring graffiti masterpieces splashed across corporate-looking buildings or refashioning the remains of a red-stickered house into artworks and useful items all became part of post-earthquakes Christchurch. Christchurch's iconic neo-Gothic cathedral was substituted with an A-Frame version partly constructed with cardboard rolls. Instead of a solemn, classic monument to acknowledge those killed in the earthquakes, 185 chairs (Fig. 7.3) were painted white by volunteers then displayed publicly to pay tribute to the victims (Bergman, 2014).

Even less-frivolous entities were creatively substituted. Instead of a solemn, classic monument to acknowledge those killed in the earthquakes, 185 chairs (Fig. 7.3) were painted white by volunteers then displayed publicly to pay tribute to the victims (Bergman, 2014).



Figure 7.3 185 Chairs memorial in remembrance of the 185 lives lost during the earthquakes.
Source: Cameron, 2016

It is significant that the novelty implemented by the predominantly pro-socially motivated participants was useful in benefitting those enduring the post-disaster setting. The participants were acting in accordance with their values. After the 'false dawn' of the first major earthquake on 4 September, 2010, while shocked, people were still able to find amusement in what felt like 'dodging a bullet'. A 7.1 earthquake had struck their city, buildings had fallen down, but no-one had died as a direct result of the event (EQC, 2013). Children's books were written about the happy return of animals, for example *Quaky Cat* by Diana Noonan. Other publications featured earthquake-related humour. Emma, a commenter on a page promoting the Bruce Raines compiled book *You know you're from CHCH when ...* claimed her favourite quip to be "You know your [sic] from CHCH when a blue box appears outside your house in the middle of the night and you don't think it is the doctor and his

TARDIS!!!, with reference to the ubiquitous Porta-loos in seemingly every Christchurch street (Goodreads, 2011). After the tragedy of the second major event on 21 February, 2011 such frivolousness and self-congratulation would have seemed inappropriate and likely scorned.

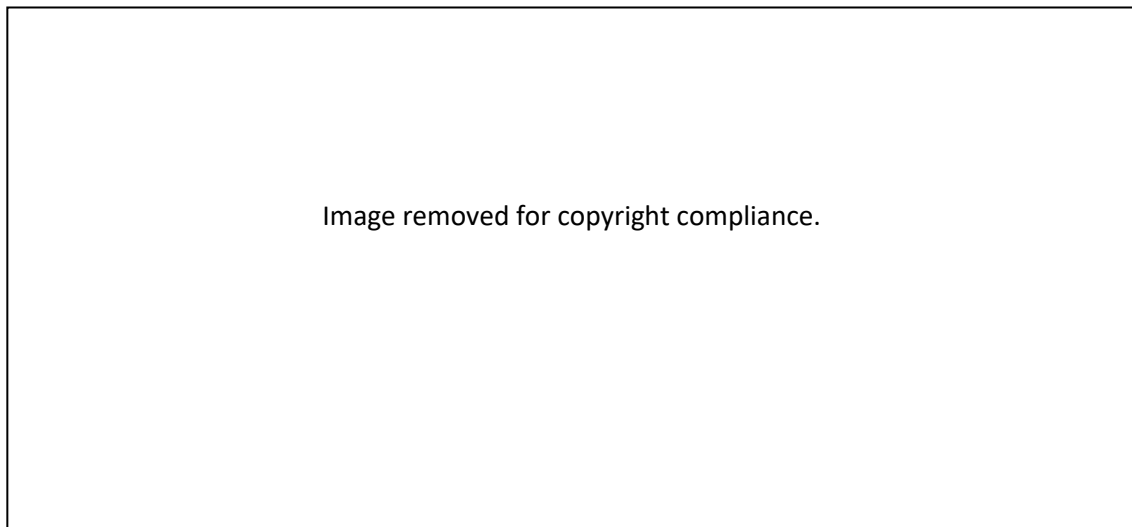


Figure 7.4 Christchurch's 'Cardboard' Cathedral.

Individuals can be ill-equipped, and lack knowledge of how to deal with something unexpected and unprecedented. "Unexpected events, particularly those creating surprise, interrupt ongoing mental and behavioral processes, creating an increased potential for unwanted outcomes to the situation" (Kochan, 2005, p.ii). It appears that producing and supporting creativity that enhanced the wellbeing of those in the post-disaster setting was how the participants opted to respond and 'deal with' the situation. They had the skills, means and opportunity to do something to help. Their enthusiasm and courage appeared to create momentum and allowed others to become involved, express themselves and relieve tension they may not have known how to express. This illustrates that a distinctive type of post-disaster creativity exists, one that is based on novelty becoming more highly valued for its usefulness *as novelty*.

Participants' novel responses to the social processes instigated by the disaster resulted in their ideas and skills, influenced by their values, and channelled through a 'prosocial filter', being a type of creativity that differs to that in 'normal' settings. In more routine settings, context serves as another factor – or input – in the process. In non-disaster settings creators are freer to create as they will, without the pressure of the social and physical environments being especially dependent on what is produced. Those who are pro-socially motivated, and, perhaps, more agreeable than extraverted, experience the additional pressure to create appropriately, which further perpetuates the production of a type of 'post-disaster creativity'.

The creative idea implementers involved in this study expressed appreciation for the early to medium term post-disaster period when novelty was highly valued. However, the context itself was dynamic and featured evolving social processes, specifically away from a spirit of recovery towards a form of 'elite panic' (Sections 6.2.5 and 7.5.2). The post-disaster energy that initially resulted in a proliferation and appreciation of novelty began to subside, which led to a winnowing of the appeal of creativity as the recovery period progressed. According to the data, appreciation of extremely novel creative ideas appeared to decrease as stability returned and governmental and other systems overcame the difficulties brought about by the earthquakes and began to operate as they did prior to the earthquakes. Novel ideas were no longer viewed as useful adaptive substitutes once established or traditional methods were again available. Only the most dedicated appeared willing to persevere, and with conditions that allowed them either to continue to create or accept a full return to a pre-earthquake status quo when creative approaches were perhaps considered an undesirable option. This was illustrated by a participant who lamented the apparent fatigue that she began to notice at the end of 2014. It became more difficult to garner support for creative ideas. She said:

It's easy to just take the simple option rather than the challenging option. People can be loath to criticise what's going on, even if it's mediocre for this reason. Perhaps they're fearful that if they criticise, it may stop and then we'd be back to nothing again. (S20)

Fritz (1996) had observed this as an expected occurrence as people "return to normal pursuits" (p.29). A disaster is new, interesting and brings purpose and meaning. However, as time passes the thrill dies with the post-disaster energy and the stresses of a routine life re-emerging, making usefulness once again more important to just getting by. This shift was noticed by participants who commented on increasing criticism of their creative ideas.

A community member was quoted in *The Press* referring to a range of once revered creative ideas as "messy" and "backward" (Harvie, 2014). The previously celebrated 185 chairs memorial (Fig 7.3) also received criticism, with some family members of victims considering it "self-indulgent, inappropriate and strange" (Lee, 2017). Many of those interviewed also felt that creativity had never been truly valued as it had been marginalised. They saw this demonstrated in future plans for the wider city to be rebuilt into large precincts. Some were demoralised and demotivated by a clear lack of faith in the wider community being capable or able to construct an innovative 21st century city. This view was supported in the media. John McCrone, wrote in *The future isn't going anywhere, so why did Christchurch rebuild the city of yesterday?* that "...the big question seems to be why the city's recovery became such a conservative affair".

McCrone interviewed Anake Goodall, chair of Akina Foundation, which focuses on enhancing positive social and environmental change in business development. Goodall "saw little room for diverse

voices to contribute to the discussion or physical scope for organic, creative growth in CERA's relatively rapidly produced blueprint plans" (2017). The new Creative Novelty Value Shift Model (Fig 7.1) illustrates how the value of creativity can shift after a disaster. The shapes of the model encapsulate and suggest that perceptions of creativity, as a social construction may change in response to needs influenced by social, political, economic or environmental forces. The model shows that before a disaster, in a routine setting, the value of creativity is judged by the usefulness of its output. The narrow point of each triangle suggests the limited value of novelty in non-disaster times. The equal widths of each end of the rectangle, represent a 'shift' in the value of novelty, showing it to be perceived as being of equal value to utility after a disaster. As explained in Chapter 2, to be widely accepted creativity should serve a clear purpose or solve a problem (Csikszentmihalyi, 1996). Usefulness is considered paramount, while novelty contributes an aspect of interest.

In contrast, Runco and Beghetto's (2019) Personal and Secondary Creativity (PSC) model, discussed in Chapter 2, proposes that creative value does not depend on social acceptance. Social value is considered separately from personal creativity. Audience valuation is valid, but so, too, is subjective valuing of personal creativity. However, the PSC model does not distinguish between the values of novelty and utility separately. This study's resulting Creativity Novelty Value Shift Model (Fig.7.1) does. It proposes that the novelty component of creativity can increase in value after a disaster. This occurs because the perceived social value (usefulness) of novelty itself can increase, prior to waning as recovery progresses.

In the period following a disaster there is a greater acceptance of high levels of novelty. This occurs for two reasons. Firstly, the loss of more traditional or expected options are reduced, so creative – novel, unique, strange, quirky – alternatives become acceptable substitutes and allow a sense of normality to ensue. Secondly, the amusement and distraction that results from the implementation of unusual approaches is useful. It is not only useful to those in search of satisfactory alternatives and adaptations, but to those in authority who are unprepared and do not have the time, skills or, perhaps, inclination to distract and amuse those affected by the disaster. As the recovery period progresses, tolerance and acceptance of novelty appears to wane. Familiar goods and services are once more available and unusual alternatives can be seen as having 'exhausted their welcome'. These unusual alternatives also can begin to be seen as reminders of a more miserable time, and be associated with the earthquakes. Consequently, during the later recovery period, creativity becomes, once again, judged by its ability to serve a commonly acceptable purpose, with novelty as merely a point of difference.

To summarise, based on interview data, with support of relevant media commentary, the novelty aspect of creative ideas was highly valued in the immediate and medium terms of the recovery

period. This is because creative products and services met needs for which there may have been no alternatives. As the community and organisations stabilised, and more commonly expected or familiar goods and services become available, the need to accept something 'strange' abated. Some participants were involved in enacting creative ideas that were more adaptive than novel - i.e. they were higher in utility. Some examples include furniture manufacturers, agencies involved in enabling creators or recyclers. While such ventures may have been prompted by the earthquake setting, they did not depend on it in the way ventures based on ideas developed to address an immediate need did. Creative ideas that are higher in utility than originality can adapt their novelty and remain useful. They do not depend on the disaster setting to validate the value of the ideas. Although all of the study participants' ideas can be considered creative to a degree, those not specifically created solely to service disaster-generated needs are ultimately more useful, even if they are less creative. This form of creativity is therefore more highly valued by the wider community after a disaster.

7.5 Enablers

Many aspects of the post-disaster physical and social environment contributed to creative idea implementation, but the data indicate that a 'spirit of recovery', opportunities directly presented by earthquakes, actions of the Christchurch City Council and an attitudinal shift were the most supportive factors.

7.5.1 Spirit of Recovery

The immediate emergence of a 'spirit of recovery' was a social process instigated by the earthquake sequence that had a profound and significant effect. Practical and emotional support evolved due to an enhanced sense of community. The joint experience of the earthquakes, along with the uncertainty that followed, provided the impetus for many in the community to work together and help others:

People's initial responses showed an immediate "commoning" of resources where neighbours helped neighbours clear up, where food was shared, where know-how and tools were exchanged, where pit latrines were dug, where individually owned generators became a central hub for charging all the phones in the street. (Dombroski et al. 2019 p.318)

This was a highly supportive factor noted by various participants, particularly in the early recovery phase. Just as the wider community experienced the post-disaster spirit, the creative community within it became more unified, with organisations established and becoming widely-known for their creative ideas *and* their willingness to support and enable others. Past barriers and rivalry amongst competitors, 'tiers' of society and sub-cultures of Christchurch society appeared to disappear. People

felt united and acting on novel ideas was less fear-inducing in the increasingly hospitable environment. This mood was reflected in the data.

The study confirmed what past disaster researchers have found regarding the onset of an enhanced sense of community amongst those who share the experience of disaster. As mentioned, disasters allow previous, more routine existence to be viewed as dull and ordinary, difficult and stressful, unfulfilling and conformist by comparison (Fritz, 1996). Fritz found that individuals believed disasters enabled them to become better versions of themselves. A disaster provides a clear, immediate purpose that individuals can feel the lack of in more routine settings. Fritz's work revealed that feeling effective and sharing experiences with others led to people suddenly discovering that they had much in common. This could be viewed as a 'silver lining' to a disaster (1996). Bastion, Jetten, Thai and Steffens (2018) also found that "sharing aversive experiences of pain can enhance supportive team interaction and that this in turn promotes creativity" (p.6). Solnit's *A Paradise Built in Hell* (2009), that chronicles the behaviour of disaster-affected communities throughout the 20th century, also argued that this phenomenon is a widespread occurrence.

The commonality amongst past research on community disaster is that communities respond to disasters by responding to each other's needs. This collective action not only provides remedy for the immediate physical and social needs of individuals, but also – at least for a time – fills a spiritual void. The community mood contributes to a sense of psychological safety known to be conducive to creative idea implementation (Hennessey & Amabile, 2010). It was this energy that contributed to the buoyancy of the creative idea implementers and helped create the momentum that supported and maintained their efforts in, especially, the early post-disaster period.

7.5.2 Post-earthquake opportunities

The word 'opportunities' was one of the most common recorded amongst participants' responses. As discussed earlier, many participants claimed to enjoy a challenge. Therefore, accepting the opportunities presented by the unstable setting could be expected to appeal to many of those interviewed. The earthquake destroyed much of what was part of peoples' everyday lives. The destruction resulted in both the loss of necessities and lifestyle options. There were plenty of opportunities for these to be either adapted, repaired or substituted with creative alternatives. In this initial stage, professional rescue, recovery and infrastructure repair teams aside, creative ideas helped provide comfort, entertainment, relaxation options and sustenance. Participants helped fill these voids in interesting ways. Unique options arose to borrow books, watch films, dance, eat, drink, shop or watch live music. Many believed that as the wider community appeared to relax their attitude with regards to a preference for more conservative or traditional approaches and solutions, opportunities arose to utilise unexpected alternative spaces for both performance and business

purposes. Constant demolition of large buildings in the central city left spaces available to be filled by those with creative ideas. These opportunities were likely perpetuated by landlords finding repairing or rebuilding was not a straightforward option. Seeing creative ventures or fixtures emerge in vacant lots became more commonplace and an acceptable way for land to be occupied in the interim.

Those with prosocial values saw opportunities to effect change, as did those who wanted to 'make their mark' in a city that was redefining itself. Power and leadership vacuums appeared which provided opportunities for those who were ambitious or at least partially driven by ego. The literal rebuild of the city provided a wealth of opportunities for those in the building trades, but also for creative people. A decline in the number of businesses and services operating in the city provided opportunities not only for those wanting to implement creative alternatives, but those already in a creative industry who found they had less competition. The risk involved in trialling creative services or products was reduced if options were fewer. The data revealed that people who would have been less inclined to attempt something novel in a more crowded market began to initiate and implement creative ideas.

The findings of this study resonate with those of past research. It appears that opportunities are regularly, if not routinely, capitalised on after a disaster. Johannisson and Olaison's (2007) discussed how others being inconvenienced by a disaster can provide opportunities for those with the skills and strength to alleviate their misfortune. Dew (2009) wrote of the role of serendipity, referring to it as a 'fortunate accident'. Dew claimed that being alert to serendipitous opportunities is a key skill at the recognition stage of entrepreneurship. Many of the opportunities taken by those interviewed for this study all, to a greater or lesser extent, resulted from the 'fortunate accident' of the earthquakes. However, some were also aided by the opportunities presented due to those in authority not being fully prepared for the unexpected and unprecedented situation. The rules were no longer clear, could not always be applied, nor adequately policed. This provided the opportunity for creative individuals to test boundaries – or ignore them completely. As Wachtendorf (2004) wrote, after a major disaster "no precise template exists... from which to deviate. This lack of a template provides some degree of freedom for those engaged in the creative improvisation process" (p.198).

As can be seen, past research has identified similar opportunity for capitalisation after disasters. This is perhaps unsurprising. If a diminished life of lack is the alternative why would those with the propensity to do so not take opportunities to implement creative solutions? Local government also recognised that much was lacking after the earthquakes and made support options available; at least initially.

7.5.3 Christchurch City Council

Overall, study participants who interacted with the Christchurch City Council (CCC) in relation to their creative ideas generally found the local government entity to be supportive and enabling.

Importantly, some participants mentioned, by name, elected members of the Christchurch City Council who campaigned for office knowing the challenges ahead, and who had made an important contribution. The Christchurch mayor was one such councillor. Others mentioned a past mayor and a then current councillor as another known to be involved in, and supportive of, transitional, creative projects. Some participants who had involvement with the City Council during this time indicated that a significant proportion of those with civic power realised the valuable contribution creative thinkers and actors were making to the recovery. Council funding support was available and provided to a range of participants.

As discussed in the previous section, another enabling factor was that local government was caught 'off guard' by the earthquakes. This resulted in some intentional lenience regarding rules and policing of regulations. For instance, it was mentioned that consent was granted for creative activity to occur that would have been unlikely to have been allowed prior to the earthquakes. At least in the initial post-disaster period, participants believed authority figures were aware that the situation was unique and called for the authorisation of unique measures. Some reported that Council representatives knowingly turned a 'blind eye' to what was implemented. They believed there was interest in how some ventures would flourish. Others knew the city needed investment. This attitude enabled those in a strong financial position.

Again, this study is confirmatory with regards to how authority tends to respond after a disaster. According to Drury and Olson (1998) the increased pressure on systems of government after a disaster results in the empowerment of others. Gardner (2013) wrote of re-evaluation by those overwhelmed by events, allowing established norms to be questioned. Other researchers have concurred with these findings (e.g., Fligstein, 1997; Brück, Llusa, & Tavares, 2011; Lanzara, 1983). Those who implemented creative ideas after the Christchurch earthquakes were able to take advantage of a local government that they experienced as being both understanding and appreciative of the social and economic value of unique creative approaches. In addition, they could also capitalise on the local body authority being unprepared for the scale of the disaster, particularly given its ongoing nature.

7.5.4 Attitudinal shift

Another enabling factor, also mentioned in relation to the value of novelty and prevalence of opportunities, was the significant shift in attitude in relation to the acceptance of more alternative

approaches and creations. This was regularly reflected in comments extracted from the interview data. This belief may have worked in unison with the notion identified by those who claimed the city was ripe for such a change. Participants commented on what was widely regarded as an 'old boys' network', 'old school' or 'old guard' as having lost the power to maintain conservative traditions in the city - a city in which so many classically-styled buildings and monuments in recognition of their ancestors and beliefs had fallen. Overall, the shift in attitude was noted and appreciated by those who took advantage of the chance to cross boundaries that had been closely guarded prior to the earthquakes. An extensive list of comments on this theme was gathered from the data, which emphasises the extent and agreement of the perception. It is suggested that the attitude shift was extremely welcome, a situation that was long awaited and one that could not be squandered. Christchurch finally felt like it was more 'their' place, or at least had a place for creative people and other alternative thinkers or those with less traditional views. Disruption of a social setting in this way has been previously observed by Rodriguez et al. (2006). They stated that a sense of disorder can extend beyond bureaucracy and into the wider social setting after a disaster. Rodriguez et al. (2006) found that disasters "break the rules that guide the ordinary conduct...Disasters create new environments that must be explored, assessed, and comprehended "(p.128). In her book *Christchurch Ruptures*, Katie Pickles, comprehensively analysed the impetus, and need, for the change from a historian's perspective. This study's data reveal that this view was widely shared and embraced by those wishing to progress and deviate from the city's traditional path. In her book's foreword Pickles says:

The earthquakes have exposed major components in the history of Christchurch, such as the dominant Anglican tradition and Englishness, the denial of a Maori past and the environmental pitfalls of building a city on a swamp...it is unhelpful and inaccurate to cling to an imagined city. (2016, p.iv)

Participants noticed and capitalised on what some had already suspected: that the seemingly self-proclaimed, but widely recognised 'old guard' and largely conservative populace held views that – like the city - were not necessarily built on solid or valid foundations and, therefore, were not unshakeable. These social shifts in Christchurch seemed significant in a city known for its conservatism (Christchurch City Council, 2005). The shift in conservatism, while it endured, was yet another enabler of liberal creative activity after the earthquakes.

7.6 Obstacles

As with the enablers, participants mentioned a wide range of factors considered inhibiting to the implementation and sustainment of their creative ideas. Characteristically, a lack of financial drive amongst those primarily motivated to achieve prosocial goals – perhaps coupled with an excess of

agreeableness and limited extraversion – could be viewed as an obstacle to any desired ongoing success. This ‘obstacle’ presented by lacking financial drive, however, may also be a feature of wider New Zealand culture, acknowledged prior to the earthquake (Rinne & Fairweather, 2011). The concept is known as satisficing (Simon, 1958) and refers to “a mixed means of achieving satisfaction” (McDonagh et al., 2019, p.860). In place of large financial profits, small business owners, in particular, are prepared to accept a dividend only partially comprised of financial reward. The freedom that accompanies a sense of autonomy, enjoyment of the physical environment created and social interactions with customers and the wider public are valued. These benefits combine to incentivise and remunerate in addition to a business-sustaining amount of revenue. This seems particularly so for the type of ventures that involve creativity, such as those studied by McDonagh, Bowring and Perkins (2019) in an area – Lichfield Lanes - near Christchurch’s CBD that was experiencing a revitalisation prior to the earthquake. It was an area “often characterised by a variety of bars, restaurants, and retail outlets of an “alternative” or “bohemian” style (McDonagh et al., 2019, p.860).

However, place-related obstacles, despite being multi-faceted, can be discussed under two themes; one relating to issues associated with the return to ‘normal’ and the other linking factors associated with central government and a form of elite panic. Many of the factors perceived as hindrances relate to what participants originally viewed as enablers, the benefits of which diminished as the recovery progressed regeneration. This situation further demonstrates the dynamism in both the post-earthquakes setting and the creative activity that needed to be reassessed and evolve – or not. The following sections will discuss what the data reveal to be obstacles to the implementation, establishment and longevity of creative projects and ventures in the post-disaster setting. As stated the city’s return to a form of normality, resulting in reduced motivation, the dispiriting actions and attitude of the central government authority and a level of ‘elite panic’ were found to be significant obstacles to creativity and its ability to proceed and flourish in the regeneration phase.

7.6.1 Return to normal

Around the period the interview data were gathered in 2015 and 2016 the city was still in disarray (Wright 2016). The rebuild had progressed and some innovative buildings appeared, often in less prominent parts of the city (Killick, 2015). However, the environment had become less welcoming of creative and quirky approaches and adaptations. Some creative ideas that were seen as beneficial in the earlier post-quake period were now viewed as less so as people adapted to life in the post-quake city. Unique products and services viewed as ground-breaking and essential were now seen by some as transitional, stop-gap measures. They were valued less, participants reported. As mentioned in section 7.4, some were even ridiculed or became catalysts for personal criticism of the

creators. It seems post-disaster joy is well known to be ephemeral, yet still allows growth. Solnit (2009) who concurred with similar findings of Fritz (1996), wrote of the phenomenon of "post-traumatic-growth" when the "devastation of loss provides an opportunity to build a new, superior life structure almost from scratch" and "people valued the sense of urgency, solidarity and depth, a shift away from an everyday diet of trivia to major questions about life, death, politics and meaning" (2009, p.222).

As participants expressed, the post-disaster period can be a thrilling and joyous time of action and unity. However, it is also known that this period is almost always short-lived. Fritz (1996) also wrote of how a return to normal reduces the high spirits prompted by a sense of having flourished amongst those sharing the experience. In Christchurch the dulling of spirits was enhanced by it becoming more difficult to gain assistance and support. Perhaps the dulling of spirits was somewhat responsible for support becoming less available, as the sentiment was widely reported. The community was tired and many had ongoing challenges. A lot of participants spoke of the stress of having to deal with insurance claims, repair damaged homes, altered work or schooling situations, in addition to the need to navigate a city full of demolition sites and roadworks. Literally losing a sense of direction in a city that many had known all their lives was common and this lost direction seeped into social and home lives as well. This was also the case for businesses, organisations and local government.

Although Christchurch's GDP showed a healthy economy had re-emerged by 2014, this largely reflected activity in the construction industry and did not account for the city's lost assets. With regard to general wellbeing, many were still displaced or awaiting insurance settlements (StatsNZ, 2018). Therefore, the situation remained uncertain despite several years having past. While spirits waned lives had to be forged in the - slowly - regenerating city. Regarding creative activity, participants noticed potential supporters becoming more wary and risk averse. Safety, security and stability were paramount, and creative ideas tended to guarantee none of these attributes. On a return visit to an interviewee to gain an update on the progress of his creative project a businessman exemplified this situation by saying that creative ideas are still considered but the response to them was likely to be *"Great! Can you take it through these four committees?"* (C07). This was very different to the instinctive, open-minded approach to creative idea implementation in the earlier post-disaster period, and it became an obstacle to the implementation or continuation of creative ideas.

Problems remained for those who were still in the process of re-establishing, including those implementing creative ideas. Some of the obstacles were related to business premises. For instance, one furniture creator suddenly found their premise unfit after initially being assured the building was

safe. Premises were scarce, particularly for those who were not immediately aware they were required to vacate their existing building. Business upheavals for participants could occur at the same time as coordinating a family move to allow for repairs to an earthquake damaged home. The 'new normal' was stressful and challenging. Others felt the pressure through the need to evolve. This was the case for those who directly relied on finite earthquake-generated materials, for example waste wood or vacant land. The unpredictable nature of the setting meant those who could have provided valuable investment were nervous. A social entrepreneur with a business that produced popular products using waste materials destined for landfill was negatively affected by this perceived attitude. In addition, although life in the city returned to a sense of normality, there were now fewer tourists. An artist whose creativity was her livelihood reflected on how the earthquakes had affected pricing and an alteration in the perceived value of creative products. Without tourists' spending artists suffered, which in turn affected motivation. Other participants, also spoke of suffering for the lack of tourists - their major market – who, they said, had been discouraged from visiting the city or feared future earthquakes (Wood, 2012). Creators spoke of losing spontaneity and becoming resigned to the inevitability of a return of old attitudes and restrictions. This too was demotivating. Participants spoke of funding being less available from the city council once the city moved from recovery to a regenerative phase (Meier, Steerman & Mathewson, 2015). They reported that earlier funding had been intended mainly to enable the reinvigoration of the central city. Once that had been achieved it appeared little was available for sustaining creative implementations.

The inability to retain the sense of satisfaction obtained by benefitting others, combined with less support for novel approaches, quelled the motivation of those intent on supporting their community. As the obstacles intensified, motivation diminished further, creative projects struggled or were abandoned entirely.

7.6.2 CERA and a moderate elite panic

Despite participant support for the enabling actions of the Christchurch City Council, some considered council representatives unreasonably risk-averse given the unusual circumstances. However, criticism of local government was relatively insignificant in comparison to the impediment to creativity that central government's Canterbury Earthquake Recovery Authority (CERA) posed. As discussed, the Christchurch City Council was supportive of transitional projects in the transitional period. Although, the same cannot be said for CERA. The central government authority did not receive praise from any study participant. In fact, there was belief that its actions thwarted the creative initiatives of the city in order to maintain a single-minded approach. They were perceived as undemocratic and anti-creative. Arguably, this was the most consistent finding amongst participants. There was vast – unprompted – agreement that the swiftly created blueprint for the city's rebuild

was bewildering and demotivating. The disillusionment specifically stemmed from the plan to divide the central city into large precincts, some of which were dependent on the creation of expensive, problematic anchor projects (Fig 7.5).



7.5 The Blueprint for Central Christchurch.

The disillusionment was illustrated by a writer, whose by-line describes him as “Founder of @freerangepress. Lover of the City, Design, Politics, and Pirates. Part-time architect. Politically inclined”, wrote in *Christchurch Convention Centre: The closer I look the less it makes sense* with reference to a key anchor project:

The total cost for the project is over \$500 million. Yet, despite its crucial position in the city and the enormous amount of money being put into this project almost nothing is known about critical things like: what is actually going to be in the precinct, if it is going to make money, and even who will own it. The project has required the purchase and demolition of dozens of buildings, it will require the closure and removal of a major road through the city. There has been no public consultation at all, and little communication even with the local council (Bennett, 2015).

The wide consensus that the creation of these precincts would compartmentalise the city, discouraging creativity and diversity, has been discussed. The blanket plan was seen as a squandered opportunity to develop a truly progressive, modern 21st century city. CERA's dogged intent on executing the blueprint plan, regardless of escalating costs and only minimal acknowledgment of popular ideas and wishes for the rebuilt city gathered during the CCC's 'Share an Idea' campaign, as described in the Chapter 1, further contributed to a sense of hopelessness for those hoping for a city plan that allowed more organic and diverse development.

Some participants expected that the power and freedom they had acquired could not last. There was acknowledgment that it was '*all very unofficial*' (S04). The 'Old Boys' Network' in a Christchurch, a city that had a "reputation for being dominated by a well-heeled conservative elite" was perceived to have 'loosened its grip' in the immediate aftermath of the disaster, but some sensed it was tightening again (Christchurch City Council, 2018). This fact combined with the reestablishment of authorities resulted in a form of 'elite panic', which presented an obstacle to those involved in trying to maintain the creative ventures implemented after the earthquakes. Those who coined the phrase, Clarke and Chess, "propose three relationships between elites and panic: that elites sometimes fear panic, that elites can cause panic, and that elites can themselves panic" (2008, p.999). The relationship most pertinent in this discussion is a situation where "elites fear disruption of the social order" and "challenges to their legitimacy" (Solnit, 2009, p.127). It seems the 'elites' (elite being a relational concept referring to one's authority over another individual or group) used to holding power before a disaster, are uncomfortable in a disaster-affected setting where the previous status quo does not exist. While this group finds the situation challenging as it threatens to undermine their dominance, others more used to life on the margins are able to thrive. Past researchers have found that 'bottom-up' or 'grass roots' strategies can triumph while established institutions fail due to being unable to improvise quickly or effectively (Solnit, 2009; Quarantelli, 2002).

As reflected in this research, past studies suggest that, eventually, political and other organisations stabilise. In the initial post-disaster period, before stability returns, creative approaches are permitted – or at least tolerated. It follows that the political and social environments begin to become less accommodating of creative and unsanctioned approaches. Those in pre-disaster authority, who had been content with the status quo, eventually view unique, 'not normal' approaches to problem solving as a threat. This sentiment is clearly encapsulated in McCrone's (2017) aforementioned article when Anake Goodall, a member the Canterbury Earthquake Recovery review panel stated:

The old knew what it believed and had the capacity to build back the best version of itself fast. And as the concrete was poured, the options for the new disappeared...

Those with all the resources up the big end of town are the least responsive because they've got the least need to change. Those that are really sensitive to the change are right on the edge. And guess what, they've got no resources.

As the Christchurch City Council was known to have been supportive of transitional projects it would not be correct to assert that Christchurch experienced an overt 'elite panic'. However, central government was perceived to be a contributor to a moderated version. It is significant that CERA, with its ability to wield emergency powers, was not praised by a single participant. Instead, once creative idea implementers had been used to provide substitutions during the transitional period there was apparently no expectation that such measures would be required on an ongoing basis. They were not necessary when those who had previously sat comfortably in authority were again confident in their 'rightful' power positions and prepared for whatever may eventuate. The comments of participants who hoped or intended to continue implementing creative ideas suggest they believed doing so was possible but only within the confines of the elites' 'new normal'.

The term 'elites' is used to represent those in authoritative roles or organisations that have power to make wide-reaching decisions affecting the community. The term 'creatives' is used to indicate those who are willing and do implement novel ideas to address community need. A new model - the Post-disaster Creativity Opportunity Model (Fig. 7.6) - shows that before a disaster, 'elites' have maximum power and 'creatives' have very little. During and soon after a disaster unique and adaptive approaches are needed. Those who possess the relevant skills and characteristics gain status as the value of their skills rises while 'elites' are unable to rely on traditional or conventional measures. Their weakness results in a power vacuum that the 'creatives' take the opportunity to fill during the recovery period. They have power to act on their ideas while the new 'norms' of post-disaster life are being established, or the conventional ones re-established. As the 'elites' are more determined and better resourced they regain power over the 'creatives' who are now less motivated due to prosocial goals having been met, a lack of financial drive, fatigue or a belief that the 'elites' cannot be effectively challenged long term.

The model implies that both the 'creatives' and 'elites' responded to the social processes generated by a disaster. It can be argued that each group returns to its 'rightful' place as more familiar structural factors return and those in authority respond more authoritatively. Ultimately it appears the 'elites' traditionally dominate and control a community as they have the greatest political will and socially-influential might. This is weakened after disaster – or at least the systems within which it carries currency are – allowing the 'creatives' to claim power. However, despite 'creatives' demonstrating effectiveness in a post-disaster setting, the restabilisation of intuitions and consequent return of more traditional institutional responses is ultimately demotivating. 'Creatives'

can view a challenge to the existing power structure as futile – as the data suggest. This, combined with the lack of any immediate prosocial goals, results in the return of the pre-disaster status quo.

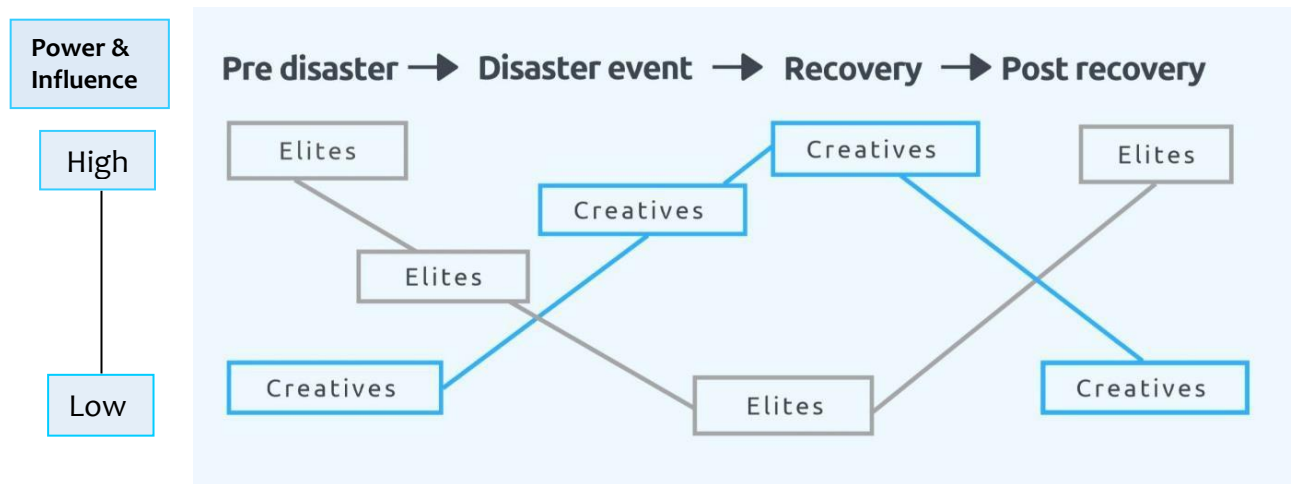


Figure 7.6 Post-Disaster Creativity Opportunity Model

7.7 Summary: post-disaster creativity vs. non-disaster creativity

Prior to presenting a pair of new complementary models that illustrate and link the findings of this research (Fig.7.7) it is important to summarise what has been learned with regards to research objective one. Most participants demonstrated or professed to have characteristics known to be associated with a creative personality. Although it is of interest to have discovered that those who choose to create after a disaster can be those who are also creative in non-disaster settings, the study reveals something previously unknown. After a disaster those with predominantly prosocial values are more likely to create to specifically enhance social benefit. The satisfaction and success of a creative venture in a disaster setting will rest on its ability to alleviate pressures. This includes those with commercial intentions.

Overall, it appeared that most participants were comfortable challenging the status quo or conditioned to life on the margins of a generally more conservative society. They were ready to adopt key roles in the social processes triggered by the disaster. It is proposed that this prior experience was beneficial in the post-disaster setting. There was a sense of comfort in the instability. Even if they did not constantly thrive on or exploit the disaster setting it would have felt less foreign to this group than to those who enjoyed and thrived in the pre-earthquakes status quo. The post-disaster creative idea implementers appear pre-adapted to think non-conservatively in an unstable environment. Many of them had done so for much of their lives.

Although it is impossible to be certain without investigating those who were non-conservative, pre-disaster creators who did not implement creative ideas after the earthquakes, it seems that pre-adaptation provides an advantage. This is particularly so given that most were well-supported emotionally, and often financially, in their social and family lives. However, those who experienced such support, preferred instability, and expected support regardless of outcome, may have been disadvantaged as the recovery process progressed. The characteristics of those who act on unique ideas after a disaster may contribute to the activation of creative ideas, but also may lead to their ultimate demise. The environment is likely to stabilise, but they may not. This means those who may have been less likely to implement a creative idea in a more routine setting (i.e., a relatively stable environment) have effectively found themselves doing so. The situation becomes less comfortable as they, once again, feel at odds with a more conservative or regimented social or economic systems and structures.

7.7.1 Non-disaster vs. Post-disaster creative idea implementation

The latter part of Chapter 7 has extrapolated the findings required to address research objective two. A systematic account is illustrated by the Non vs. Post Disaster Creativity model (Fig 7.7). The model incorporates the findings in relation to both research objectives one and two. It is necessary for them to be viewed together for comparison.

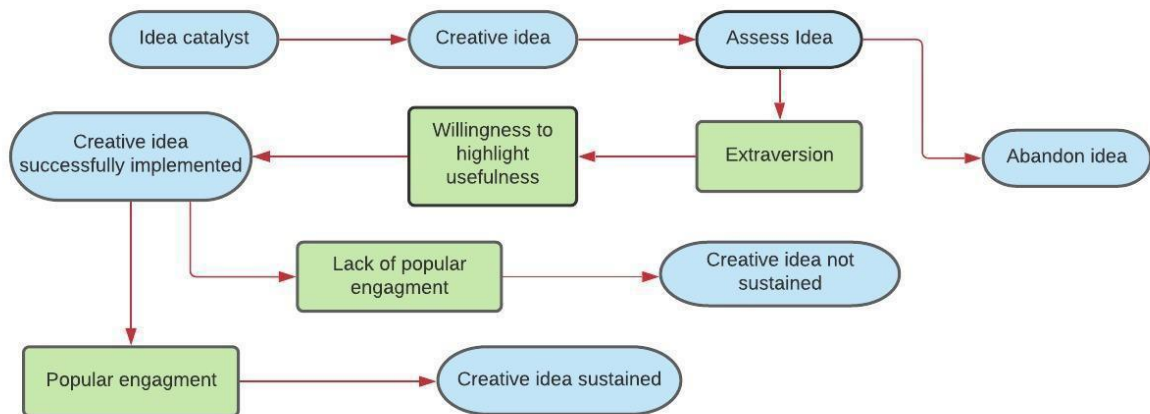
The dynamics of the model will be now be explained, beginning with what has been discussed as known to occur during the creative idea implementation process in a routine – or ‘normal’ - context. The blue represents aspects of the creative process, while the green indicates things that impact on the process. Restabilisation is indicated by the purple hexagon in the middle of the model. In a non-disaster, market-based setting an idea is sparked in an individual who assesses the idea. An idea that offers high utility is likely considered more promising. If the idea is to be implemented, as overviewed in Chapters 2 and 7, past research suggests the characteristic of extraversion would be employed to persuade supporters and establish the idea. After that point, assuming other relevant, necessary skills are effectively activated, the creative idea will either survive and develop, or fail to be sustained, based on whether or not it is popularly supported both initially and subsequently.

The ‘Non vs. Post-Disaster Creativity’ model (see Figure 7.7) depicts the process of creative idea implementation after a disaster and demonstrates how the situation differs from what occurs in more routine settings. The figure shows that when a disaster strikes it leads to both a spirit of recovery and creative ideas. Each fuels the other. Of course, if a creative idea is abandoned there is no chance of community benefit. However, if implemented, there will likely be support due to immense need, a lack of alternatives and a socially-driven ‘spirit of recovery’. These factors tend to result in creative ideas becoming immediately popular and highly valued.

Creativity begins the process of restabilisation as the initial recovery period ends. A degree of 'elite panic' can accompany restabilisation (all facets of this restabilisation are incorporated in Figure 7.7 in the label 'Restabilisation')⁶. As the community begins to stabilise, creative ideas become viewed as no longer necessary, even threatening, and a negative reminder of an insecure time. Novelty becomes less valued. Those who wish to continue to create must be willing to limit the novelty of their output, while retaining – or enhancing - utility. This will necessitate goals beyond the joy of being creative, and a financial drive. As needs are met, those who were driven to create for pro-social reasons will lose interest in continuing to enact a creative idea once goals are met and become demotivated, which results in the demise of some implemented ideas. This is particularly so if they are 'too' agreeable, they may be uninclined to draw on the extraversion needed to 'sell' ideas that were more readily accepted when alternative options were few or non-existent. The reduced appetite for novelty can be compounded by those in authority reducing or withdrawing support for creativity at this time. Ultimately, creative ideas become less popular as they represent an extreme shift from the comfort of the previous status quo. They become a distraction no longer required once more conventional options are again available.

⁶ Restabilisation coincides with pro-socially motivated creative idea implementers reaching goals and those in authority re-establishing themselves after acclimatising to the post-disaster context.

Non-disaster Creative Idea Implementation



Post-Disaster Creative Idea Implementation

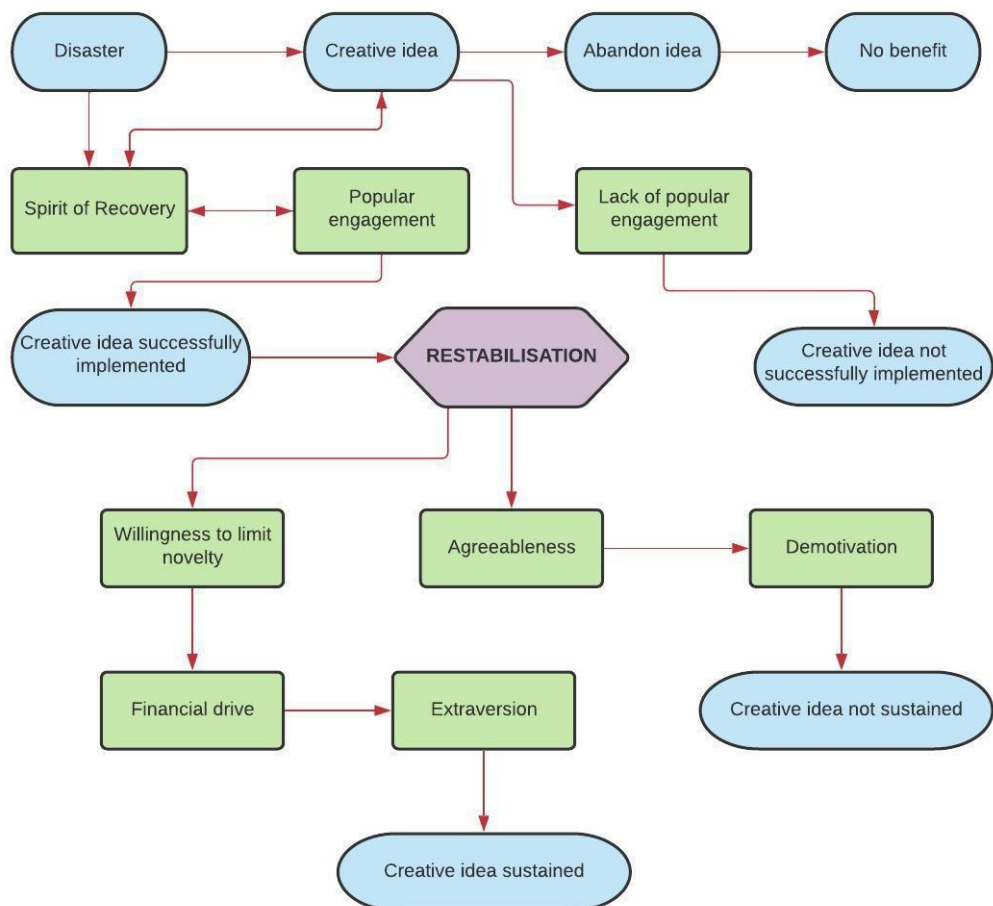


Figure 7.7 Non vs. Post-Disaster Creative Idea Implementation

The characteristics of those who choose to activate creative ideas after a disaster may impact on the outcome and longevity of the idea and resulting benefits. The prolonged benefits of creative ideas may suffer for their implementers' propensity to be satisfied once prosocial goals have been met. This may be due to an 'excess' of agreeableness, which combines with a lack of extraversion to prevent the desire or drive to 'fight' to maintain their idea in action. Moreover, commercial or financial goals tend to be absent so are unable to be an incentive for perseverance. A reduced sense of effectiveness, appreciation and the onset of fatigue can lead to disheartenment that results in the end of creative ventures. This seems particularly so, and demotivating, if pro-socially driven, agreeable individuals believe future plans for the disaster zone do not appear accommodating of organic growth or creativity. However, if a creator is willing or able to develop a financial drive and/or be willing to only incorporate moderate levels of novelty in ventures and employ extraversion for persuasive purposes, then creativity is more likely to be sustained into the recovery period. If these measures are not taken effectively an implemented creative idea is unlikely to be sustained.

Two key differences between the non-disaster and post-disaster novel idea implementation processes can be identified. Firstly, after a disaster there is little time to assess the idea and there is little to lose by trialling unproven ideas in the absence of conventional options. Secondly, the need for extraversion is reduced. Others sharing in the post-disaster experience are unlikely to require convincing that an idea to alleviate a problem should be implemented if there is a chance it could be successful, regardless of its degree of novelty. In comparison with the surrounding devastation, any resulting failure is unlikely to compare to the loss already experienced. In addition, creativity provides a 'lightness amidst the darkness', which can be appreciated in such an uncertain time.

This chapter has included three new models that demonstrate that a unique form of post-disaster creativity does exist. While nuanced data provides depth and dimensions to the findings of this research, what is key is that post-disaster creativity is predominantly prosocial. There is also a trajectory in relation to the valuation of creativity, and disasters draw into the 'mainstream' a different mix of types of individuals as participants in creative activity than happens in non-disaster settings. This difference in actors may partly explain why, despite many creative ideas implemented after a disaster doing so, others fail to maximise their social or economic potential.

Chapter 8

Conclusions

8.1 Introduction

This study of post-disaster creative idea implementation shows that there is a special type of post-disaster creativity. A type in which the novelty aspect of creative output is valued as much as its usefulness, because it *is* useful. Useful as a distraction, useful as an economic alternative, useful for uniting a community, useful as therapy, and useful for encouraging others to accept the possibilities offered by non-traditional or unexpected views and approaches. In this final chapter how each of the research objectives has been addressed will be discussed. So, too, will the relevance and timeliness of the study, its unique contributions, its limitations and suggested future research to further the understanding of what occurs at the intersection of post-disaster social processes and creativity.

8.2 Addressing the research objectives

The following sub-sections elaborate on how this exploration resulted in a new understanding about who acts creatively after disaster.

8.2.1 Objective One: Identify and discuss the characteristics, influences and motivations of those who acted creatively in post-earthquake Christchurch.

The characteristics of participants serve as confirmatory data with regards to what is known about the creative personality, as much as that is able to be determined. Most shared a range of dynamic and sensitive qualities, the intersection of which creates tension that can be integral to the creativity process (Csikszentmihalyi, 1996). Such characteristics would likely have contributed to idea implementation in the post-disaster circumstances, as they would in any. The ‘as they would in any’ is important to note. This study, other than being confirmatory, does not shed new light on what creative people are like characteristically. However, it does show that those with characteristics commonly demonstrated by those who implement creative ideas – and are pro-socially motivated – are willing and able to adapt their skills to serve the needs of a community after a disaster.

With regards to those who were creative in the setting, it seems two key personal attributes prompt creative idea implementation after disaster. Firstly, those who acted on creative ideas seemed pre-adapted to operating in an unstable setting. Some thrived on the opportunity to be seen as non-traditional in their approaches, but others were comfortable with discomfort due to past experiences. They were prepared to counter resistance. Many had struggled emotionally to fit-in or find a place in the world. Others were comfortable putting themselves into potentially risky

situations prior to the earthquakes, either in an educational setting or in a business or social sense. Other citizens' 'new normal' was their 'normal'. This allowed for hasty adjustment and adaptation.

The second key personal factor that influenced creative idea implementation relates to values. Most of those interviewed were primarily motivated to help others or improve their community or wider society. The desire to achieve prosocial goals above others led to action after the earthquakes, largely because it was this type of creative action that was required and well-received. The next part of this discussion concludes how the findings of this study compare with existing models outlined in Chapter Two. They are not sufficient to explain what was seen in Christchurch.

Amabile and Pratt's (2016) Dynamic Componential Model of Creativity shows the importance of affect, in particular the way context can impact on motivation. According to the model, a setting can motivate individuals to act creatively to achieve extrinsic goals they consider 'meaningful'. However, they are important aspects, and the componential models of creativity are the most appropriate for comparison, along with the Systems Model of Creativity (Csikszentmihalyi, 1999). Amabile's earlier componential models (1983, 1996) were simpler, but did not include the emphasis on affect and 'meaningful work'. Componential models of creativity depict, or include, the componential theory of creativity as explained by Amabile (2012):

The componential theory of creativity is a comprehensive model of the social and psychological components necessary for an individual to produce creative work. The theory is grounded in a definition of creativity as the production of ideas or outcomes that are both novel and appropriate to some goal. In this theory, four components are necessary for any creative response: three components within the individual – domain relevant skills, creativity-relevant processes, and intrinsic task motivation – and one component outside the individual – the social environment in which the individual is working. (p.1)

Therefore, the environment impacts on individual motivation, encouraging the use of creative thinking skills, and the application of them in a way that solves a particular problem.

After a disaster there are important differences in relation to the Componential Model's elements. The setting itself is influential, but the motivation appears inspired by the resulting social processes of the disaster. In a - likely more predictable - organisational setting, problems to be solved by creativity are generally known at the outset. In a post-disaster context those inclined to create wait for disaster-triggered social processes to reveal what problems are to be solved. The need for prosocial work to be completed provided extrinsic motivation for action. Once this is known pro-socially driven individuals create to solve them. They proceed by applying creative thinking skills and

targeted expertise, which demonstrates that those components of componential models of creativity still apply after a disaster.

The data suggest the enjoyment of experiencing and attempting to overcome adversity with others allowed the extrinsic motivation to prompt meaningful, not always pleasant, work to morph into intrinsic motivation. In the early stages of recovery, satisfaction gained from personal and shared effectiveness generated an inherent joy in performing the meaningful work which resulted in intrinsic motivation. This allowed creative ideas to be sustained and deliver benefits for an extended period and perhaps prompt further creativity. However, once goals were met, fatigue occurred and opportunities declined. Consequently the joy diminished and activities could become viewed as a chore. The extrinsic motivation waned, as it is prone to do (Amabile, 1983).

Csikszentmihalyi's (1999) Systems Model of Creativity (Fig 2.2) - despite context being a key feature - is also insufficient as a tool to explain post-disaster creativity. The model resonates in certain ways. It does suggest the 'field' selects the novelty, which appears to happen after a disaster. However, the post-disaster setting 'selects' a broad range – or type – of novelty, not novelty specific to a particular domain as the model suggests. The Systems Model suggests creative individuals have specific skills and knowledge of the 'field' in advance. In fact, the 'field' relies on a widely understood and entrenched knowledge of its 'rules' and parameters. No such knowledge is available after a disaster.

It is also important to note that the disaster context changed the mix of people and personalities involved in creative idea implementation. As discussed, most participants demonstrated or revealed characteristics commonly associated with creative people, but it does not necessarily follow that they had all been inclined to implement creative ideas prior to the earthquakes. For some it took the needs generated by the post-disaster environment to compel them to create in order to adapt in response to the changed social or commercial environments. The initial ease of obtaining large numbers of volunteers to support creative ventures, particularly as reported by participants involved with the Student Volunteer Army, is also testament to the willingness of individuals prepared to become involved with novelty for a useful cause. This is another way the environment impacted on the behaviour of those not necessarily prone to create, who found it within themselves to do so, or at least support creative approaches.

Finally, to conclude in relation to objective one, the TIPI results indicated agreeableness was more common amongst the participant sample of this study, and extraversion less so, in comparison with creative idea implementers in more routine settings in accordance with, primarily, the entrepreneurial literature (Shane, 2003). This finding also suggests a role of the environment. The opportunities to create to meet prosocial needs appeared to attract those who were more agreeable – or “tender-minded” - due to social processes that revealed social need to be alleviated (Mooradian,

Davis & Matler, 2011, p.101). The vast need presented by the impact of the environment on the community left little need for extraversion that was not a strong trait in the majority of those interviewed. The environment allowed the creative idea implementers to 'play to' their personal strengths, and not leave their 'comfort zones', which likely contributed to the implementation of their creative ideas.

8.2.2 Objective Two: Critically evaluate and provide a systemic account of the ways in which creative activity occurred in response to a situation of collective adversity.

Firstly, what *happens* to creativity after the disaster? Creativity was highly valued in the initial and early recovery periods after the earthquakes. Disasters, generally, cause the instant loss of many necessary goods and services, as well as infrastructure damage and the removal of lifestyle options. Although government – central and local – and other agencies plan and prepare for disaster, each event has its own character which means precise preparation is impossible. There is also a sense of urgency. Products and services are needed immediately. There are undoubtedly instances when creativity saves lives in the immediate aftermath of disaster, but the creativity focused on in this research was highly valued for its ability to 'fill in the gaps' of what had been displaced or lost, and for innovative adaption of business practices. As is reflected in both international and local expertise, creativity in Christchurch not only provided options for unique food, coffee, shopping or a show in unexpected venues in the devastated city, it also generated energy due to the level of uniqueness and demonstration of 'outside-the-box' thinking demonstrated. It created a momentum that encouraged the wider populace to embrace alternative approaches, allowing it to be seen as part of the new normal.

As discussed, it appears the increased appreciation and value of novelty was due to its increase in usefulness. After a disaster, a unique approach may be the only option available to replace something lost and restore a sense of normality. However, this situation does not last. This shift in the appreciation and value of novelty has been depicted in one of three new models generated by the data of this study – the Post-disaster Creative Novelty Value Model (Fig. 7.1).

In the first four years after major earthquakes it appears creativity had no limits; creative ideas could not be too novel. However, as the city moved from recovery to regeneration creativity became less valued. By this time CERA had established a blueprint for the city which appeared to limit the prospect of ongoing creativity. Reduced funding and support indicated there was little need for creative approaches once those in authority had re-established themselves and their organisations. In addition, the wider populace became less tolerant of what had been created in the transitional period. Novelty was acceptable, provided this component of creativity was outweighed by the other

– usefulness. Novelty as a distraction becomes less necessary, less useful and consequently less valued.

The most revealing findings in relation to contributory contextual factors are those that allowed creativity to be accommodated, funded and appreciated. The most significant contextual factor was the physical form in which the earthquakes had left the central city.

The characteristics and values of the participants themselves and, as mentioned, the earthquakes that triggered the social processes that created demand for their skills were most enabling. However, other factors were supportive. Local government that appreciated the value of creative substitutions for goods, services, entertainment and liveliness in an initially bereft city were enabling. In addition, so too were direct funding and those in authority who were prepared to either ‘turn a blind eye’ to, or failed to regulate, unconventional activity. Socially, a ‘spirit of recovery’ resulted in greater tolerance of difference and appreciation of others experiencing the aftermath of the earthquakes, and eventually evolved into an attitudinal shift – another social process triggered by the earthquakes - in the traditionally conservative city. The way creative individuals intersected with the spirit and appreciation buoyed those who were supporting and helping to sustain the creative ideas. There appears to have been a shared faith that those implementing creative ideas were contributing something meaningful and appropriate. The distinctive type of prosocial creativity produced - whether it served those in search of distraction or in need of alternatives for what was lost – was channelled through such a filter as it could not be forgotten that the disaster was a tragic circumstance. It was not the time for ‘useless’ frivolousness.

It appears participants perceived there was little to hinder creative idea implementation in the initial post-disaster period. However, as the city entered the regeneration phase, CERA was more obviously found to be a hindrance. Although the new city blueprint plan, which involved the central city being divided into large designated precincts was yet to be actioned it was still viewed as disheartening and demotivating for creative participants who did not see a place for themselves in a city of that form.

It is feasible to consider that the creativity that emerged because of the earthquakes became associated with them. These were events people wanted to ‘move on’ from, so the transitional creativity, in particular, may have been an unwelcome reminder of the disaster as well as an accentuation of the slow speed of the recovery. In addition, despite it being a moderated version, there was an element of elite panic in Christchurch. The power vacuum was closing. Not only did creative idea implementers feel less power to act, but those in authority tended to overtly disapprove of creative methods. It is reasonable to propose this attitude was fuelled by a desire to return to a pre-earthquakes status quo.

The second of the three new models is the Post-Disaster Creativity Opportunity Model (Fig. 7.6). This model illustrates how creative idea implementers are able to occupy a power vacuum that becomes available when those in authority are 'caught off-guard' and destabilised after a disaster. This provides an opportunity for those who are willing and able to act creatively to take advantage of a situation that features a relaxation of rules and greater tolerance for creativity. The model also shows that those with previous authority eventually re-stabilise and regain power. Time wise, this coincides with those who were primarily compelled to create for prosocial reasons, meeting their goals and losing motivation.

The final of the three models is the most comprehensive as it brings all the key findings of this research together to provide a useful comparison of the creative process before and after a disaster. The Non vs. Post Disaster Creativity model has been fully explained in section 7.6. When using the 'Non-disaster' part of the model as comparison, it can be seen that the key differences relate to what occurs at the idea generation and implementation stages. The disaster setting itself triggers a social response that substitutes much of the human effort usually assumed necessary when implementing a creative idea in a non-disaster setting (Miller, 2015). The opportunities to provide goods and services that are no longer be available, yet urgently and enthusiastically sought, leads to a 'fast tracking' of the idea assessment, implementation and adoption stages.

8.3 Relevance and timeliness of the research

There are two key reasons why this research is timely and relevant. Firstly, the number of disasters across the globe annually continues to rise. In a Special Report for the Intergovernmental Panel on Climate Change (ICPP) a disaster is defined as any event involving adverse impacts that "produce widespread damage and cause severe alterations in the normal functioning of communities or societies" (Field, Barros, Stocker, & Dahe, 2012, p.4). Climate change is believed to be responsible for the enormous increase in weather related natural disasters. Hay, Easterling, Ebi, Kitoh and Parry have noted an "approximately threefold increase in the number of loss relevant natural catastrophes worldwide within the last 35 years" (2016, p.1). They lament the consequences they believe will ensue for insurers and human society generally. Welzer explained how social disaster may more regularly follow natural disasters as the effect of climate change expands. For instance, flooding after Hurricane Katrina in New Orleans in 2005 created "a new form of refugee" (2015, p.25). Therefore, research that contributes knowledge about how to understand any aspect of what occurs after a disaster allows for enhanced pre-emptive crisis management. Specifically, if those compelled to implement creative ideas to alleviate the effects of disaster are prepared to assist without prompting, accommodating, supporting and valuing their contribution from the outset could increase their effectiveness. This research shows the benefits of such a strategy. Although it appears support

may have been ultimately fairly short-lived, in Christchurch the open-mindedness of some in authority allowed creative individuals to exercise their skills with relative freedom. Council appreciation reverberated into the community, or perhaps vice versa, which demonstrated how official sanctioning can prolong the benefits of creative activity.

The second key reason why this research is relevant and timely is that creativity is increasingly valued. In an organisational sense it is the key to competitive advantage. According to Thawabieh, Saleem and Hashim: “It is widely believed that human creativity is one of the main sources of gaining sustainable long-term competitive advantage for an organization or a Nation” (2016, p.1). As Thawabieh et al., (2016) also explained, organisations and companies need to secure the skills of creative people because creativity is a precursor for innovation. Constant innovation is needed if companies are to retain an ‘edge’ over their competitors.

More generally, creativity expressed via artworks is highly prized as a means of offsetting the rigours of stressful modern life. Art, through its various mediums, can provide a means of expression, entertainment and historical record. Archibald and Kitson stated that “art is an integral facet of culture and one of the powerful methods of communicating about and understanding human experience” (2019, p.2). Art is also known to provide an impetus for critical thought and engage people:

Giving people access to data most often leaves them feeling overwhelmed and disconnected, not empowered and poised for action. This is where art can make a difference...It can make the world *felt*. And this felt feeling may spur thinking, engagement, and even action. (Eliasson, 2016)

The uncertain future of work is another reason any contribution to knowledge about creativity in action should be prized. Rapidly advancing technology continues to blur the expectations of those contemplating career paths. It is the ‘soft’ skills that cannot be easily or convincingly replicated by machines that present the most enduring value. Bakhshi and Windsor state that “87 per cent of highly creative workers are at low or no risk of automation, compared with 40 per cent of jobs in the UK workforce as a whole” (2015, p.2).

Each of these reasons demonstrates that any additional knowledge gained regarding the nuances of creativity and the process of its application is valuable. Understanding what is likely to influence those who implement creative ideas, particularly in adverse circumstances, may lead to many benefits. These benefits could include greater fostering of creativity, the motivation and confidence to create, more ready support for challenging or ‘scary’ creative activity or products, and the avoidance or prevention of identifiable obstacles to its implementation.

8.4 Unique contributions

Over the years, the study of creativity has, arguably, produced a body of knowledge that is the poorer due to a variety of disparate branches being individually investigated. The literature is fragmented. Studies have produced greater understanding of how creativity develops in individuals, organisations, cultures, genders and other areas. However, greater cohesion could be achieved by further research that identifies correlations and interrelationships between the various related domains (Hennessey & Amabile, 2010). This study begins to address the need for a more integrated approach by focusing on both people *and* press, creativity *and* disasters, as it has explored the characteristics and traits that influence creativity implementation and how creativity proceeds in a situation of collective adversity.

The key unique contributions of this research have been explained in association with the three newly created models depicted in Chapter Seven. The first model, the Post-Disaster Creative Novelty Value model (Fig. 7.1), raises questions in relation to what have been implied as static values of the generally-agreed upon components of creativity, novelty and usefulness. The second model, the Post-Disaster Creativity Opportunity model (Fig. 7.6), reveals how a reduction in the power of those in pre-disaster authority can allow for greater 'freedom' which encourages and accommodates a proliferation of creativity. In Christchurch this opportunity arose and was claimed by those with creative ideas to implement for community or environmental benefit. This is of particular interest when compared to what has occurred in previous noteworthy international disaster zones. Post-disaster power vacuums in countries such as Chile, Iraq, Sri Lanka and others affected by the Boxing Day Tsunami of 2004, as well as hurricane-affected cities like New Orleans in the United States, have been commandeered by those with such agendas and suffered severe social and political effects as a consequence (Klein, 2007).

As discussed, there is limited research that *directly* focuses on creativity in a post-disaster setting. It has been examined in connection with resilience (Metzl & Morrell, 2008) and improvisation (Wachtendorf, 2004), but not with the intent to determine who creates or how the setting impacts on the creators and their creations. The findings of this study are unique through that particular lens.

Additionally, with regard to the participants, as discussed in Chapter Seven, the data revealed that although some members of each group shared characteristics, participants tended to belong to one of two groups. One group has been referred to as 'Free Thinkers'. Members could be considered less conservative, non-traditional or alternative in their approaches. Their 'otherness' has brought difficulties to some participants identified by this label, while others relished it. It is proposed that those in this group had experiences prior to the earthquakes that preadapted them to feel comfort in a setting that was 'other' to the majority. They were acclimatised and prepared to act before those

who were unused to discomfort in their wider surroundings. The other group has been referred to as 'Opportunists'. 'Opportunists' are those who have had past experience exploiting ideas, often as commercial entrepreneurs for primarily financial gain. Those associated with this group have an 'eye' for an opportunity. Like the 'Free Thinkers' those who fit into this group (and participants possessed qualities of both) were preadapted to act quickly after the earthquake. They too were relatively at ease when confronted with risk and uncertainty; although perhaps for different reasons. This categorisation adds knowledge that contributes to understanding about who is likely to act creatively after a disaster. This knowledge prompts consideration of how such individuals' abilities may be supported and capitalised on in such a setting.

8.5 Limitations

This study has some limitations. Although the sample was relatively large and resulted in ample rich data to meet the objectives, a larger participant group would have allowed categorisation in accordance with the narrower post-quake time periods in which each idea was implemented. This may have led to closer scrutiny of how different groups were impacted by the setting at various stages. A larger sample group may have also allowed for closer analysis of those creating in different domains. The participant criteria permitted creative idea implementers of a wide range of creativity to be included in the sample. Public artists, commercial and social entrepreneurs all met the criteria of implementing a novel idea that resulted in community benefit after the earthquakes. Although their creative output may appear like 'apples and oranges', the sample was fit for the purpose of gaining an understanding of who the individuals *are* that are prepared to risk implementing an untested, 'weird' solution in an environment that many fear. Indeed, the regenerative phase would have favoured some ideas more than others. Some creativity was only intended to provide short term or transitional relief or entertainment and could not be expected to endure. However, gathering perspectives regarding the experience of each, regardless of domain, begins to highlight how each may ultimately fair with regard to support and recognition. This 'limitation' has allowed key findings to emerge in relation to the apparent importance of a financial drive that will outlast a prosocial one.

Limitations can be perceived in relation to the administering of the TIPI personality test. The fact that a shorter version of the test was completed instead of an extended one, suggests that the value of the results is that they are useful indicators to be more intensively researched in the future. Although, within the context of this exploratory study, the aim of obtaining indications of who chooses to implement creative ideas after a disaster has been achieved.

Although not necessarily a priority for qualitative research, I would have personally preferred to have obtained a more diverse sample. The methods of sourcing participants – media, snowball sampling,

participant referrals - were not unique and are often used. However, the level of Māori or Pasifika participants is disappointing despite attempts to increase it. Nevertheless, the sample was relatively diverse. Genders were equally represented, a range of nationalities and ethnicities were included, and ages were across a spectrum from twenties to sixties. However, the data reveal a much more homogenous group than expected. With very few exceptions participants were raised and supported by middle to upper class parents who had remained together in a traditional partnership, with the female partner in a supporting role. It is not proposed that this observation supports the idea that to create you must be raised in a traditional two-parent home. However, it might indicate media bias in a conservative city. It might suggest the media gaze is more likely to 'find' those who live within the 'rules' of society. Although this is speculative, access to a wider range of creative idea implementers appears to have been inhibited due to those who are creating within society's margins being less often and less publicly celebrated. The data of this study would have likely been enhanced by a broader media gaze i.e. more effort by reporters to seek out those creating on the margins.

Lastly, it must also be noted that no disaster is the same as another, and earthquakes are different to other types of disaster. At the time of writing, New Zealand, like many other countries, is in a lockdown state of emergency in attempt to limit further personal tragedy and prevent an overrun health system as the natural disaster that is the COVID 19 pandemic sweeps the globe. This disaster setting is different in nature. However, the prolonged nature of the sequence of Canterbury earthquakes and aftershocks made it unique even in relation to other earthquake disasters. Despite the current pandemic, it is somewhat reassuring that past researchers Fritz (1996) and Solnit (2009) have both provided extensive and detailed accounts of a range of disasters during the 20th century that indicated that the social processes identified in this study have previously been identified after war, hurricanes, fire and earthquakes.

8.6 Future research

With reference to the Post-Disaster Creative Novelty Value Shift model (Fig. 7.1) and the Post-Disaster Creativity Opportunity model (Fig. 7.6), and indeed Amabile and Pratt's (2016) Dynamic Componential Model of Creativity (Fig 2.4), it is recommended that future creativity, disaster or entrepreneurial research identify similarities or differences with the findings of this study.

Specifically, whether or not similar findings with regards to the temporarily increased value of novelty, the appearance and demise of a post-disaster power vacuum allowing a proliferation of creativity, and the importance of meaningful work, are evident in other post-disaster settings in relation to creative idea implementation and maintenance.

The Non vs Post-Disaster Creativity model (Fig. 7.7) may be considered a useful tool for future studies of post-disaster creativity. The model shows that opportunities exist for creative ideas to be

implemented and have an increased chance of being considered, accepted and supported in the early post-disaster period. It also shows that post-disaster need and a spirit of recovery can replace much of the individual effort required at the creative idea implementation stage in a non-disaster setting. However, further research is necessary to determine how the uplifting post-disaster creative spirit that resulted in many enterprising creative ventures may be encouraged to endure beyond the recovery period.

The Non vs. Post-Disaster Creativity model suggests future research could more intensively investigate what would lead to creative idea implementers maintaining motivation. In addition, those considered the 'elites' with power to allow and encourage creative approaches could be studied with regards to their attitude to alternative approaches. What do they fear? Is it a personal concern or is their attitude influenced by the organisational culture or macro-structures in society? Understanding why motivation is lost by some, and creativity perceived as a threat by others, could result in greater awareness of each groups' stance. Consideration and questioning of personal and collective organisational attitudes may lead to the courage to not always rely on a routine or expected approach. It may be asked why it is important to be creative, or include the accommodation of creativity in urban planning. The answer is not creativity for creativity's sake, but rather for the sake of the spirit, enthusiasm and momentum it produced after the Christchurch earthquakes. Could this be replicated in a non-disaster setting for more enduring beneficial effects? Although the problems in more routine settings are less urgent, the post-earthquakes experience demonstrated that unusual approaches with unpredictable outcomes may indeed produce effective – and more interesting – solutions. In addition, creative ventures can operate at a 'grass roots' level that allows for increased diversity, and the inclusion of a wider range of tastes and perspectives. As mentioned, some creative output can appear makeshift or inadequate once more enduring or practical alternatives are again available. However, there are other creative ideas that begin spontaneously but result in a venture that could provide ongoing benefit beyond the recovery. The model shows that reduced motivation and support could result in good ideas not reaching fruition. These ideas may have evolved into a continuous provider of community benefit and enjoyment, so the model indicates potentially lost opportunities.

If the benefits of post-disaster creativity are to evolve to be relevant and successful in a recovered and regenerated disaster-affected community, alternative approaches must be taken. In relation to the actions of post-disaster creative idea implementers, although it is difficult to develop motivation once goals have been achieved, perhaps there are ways the benefits could be maintained. For instance, there appears to be opportunity for those who have enthusiasm for unique ideas but are motivated by goals other than those that are prosocial. Once a creative idea has been implemented, those with a passion for strategic thinking, development or profit, at least to the level required for

venture sustainability, may be encouraged – and supported - to ‘pick up the ball and run with it’. The original essence of the idea -albeit adapted for a new setting- may be maintained and prolonged by those with a different drive.

Further research into the findings revealed in the TIPI data is also warranted. The two of most interest are that extraversion is less necessary for those implementing creative ideas after a disaster, and that agreeableness is more prevalent. The lack of need for extraversion appears to be advantageous for creative idea implementation, but the excess of agreeableness may be concerning from a sustainability perspective if ongoing funding is required. Inquiry into how a desire to strategise and maximise financial benefits might be fostered to co-exist within those with predominantly prosocial goals would be enlightening. After ascertaining why those in authority may be afraid of creativity, why those with prosocial goals can be averse to make money could be determined.

Finally, it seems reassuring that similarities have been identified by past researchers in relation to an increase in community spirit and support following most disaster situations. However, personal observation and scrutiny of gathered media data indicates a different type of initial response in a pandemic, such as the current COVID 19 situation. The findings of this study are clear in relation to creative idea implementation for social benefit in post-disaster settings, in which members of an affected community are able to socialise and physically work - and play - together. However, it will be valuable to investigate whether a community spirit - similar to those seen in past post-disaster settings - is able to develop for common good in a context in which is considered potentially dangerous, foolish, and even shameful, to mix with others. In the early stages of the crisis, those most inclined to create for prosocial benefit had limited opportunity to do so beyond what could be achieved virtually via technology. The most prosocial act was to keep away from others and support those who were enforcing social distancing.

Interestingly, although possibly less surprising than if a conservative government had been in office, the political ‘elite’ government enforcers have faced questioning and opposition among business ‘elites’ (Stubbs, 2020). Leaders of industry are amongst those who were swift to suggest lockdown conditions have been too extreme, urging a return to ‘business as usual’ as soon as possible to salvage whichever aspects of a pre-pandemic economic status quo could be saved.

8.7 Final Remarks

In December 2019 a reporter for the *Los Angeles Times*, in search of lessons to be learned by his own city, described the altered landscape of post-quake Christchurch as somewhat depleted, rather than enhanced by enduring creativity:

The quake redrew the geography of Christchurch. Downtown is now flatter and smaller, with 1,500 buildings in the Central Business District having been demolished. Some businesses left for the suburbs and never came back. Officials also bought and demolished 8,000 houses along rivers, the coast and in the hills and restricted those areas from future development. In addition to commerce moving out of the city center, projects intended to restore Christchurch — a convention center, a recreation center, a sports stadium — have not been completed. Some are years away from becoming a reality. (Lin II, 2019)

An overview of the cityscape reveals that Edwardian and Victorian era buildings are gone. Current visitors to Christchurch in search of small, eclectic or quirky independently-owned businesses - of the type that peppered the central city prior to the earthquake – would be disappointed. There are some noticeable exceptions. The feather-cloak inspired façade of a prominent building in the Justice precinct looks well-crafted and eye-catching. The Riverside Market complex and restaurants and bars on ‘The Strip’ are truly impressive and arguably comparable to any international equivalents. However, the central city is predominantly comprised of “corporate style new build office buildings with ground floor retail shops” (McDonagh et al., 2018, p.862). Forces such as insurance pay outs dependent on rebuilding premises that are safe and attractive to “bankable” tenants has led to wealthy, financially-driven landowners creating conservatively. Cost structures mean that multi-national chain stores and other big business tend to dominate, as they do in suburban shopping malls (McDonagh et al., 2018, p.863).

This situation indicates that the fears of many of those interviewed for this study have been realised. There seems little space for creative or quirky enterprises to organically proliferate. However, one wonders what might occur if central city premises cannot be filled by ‘bankable’ corporate clients. Especially when local and global economic uncertainty threatens.

The future aside, using the lack of specific media reporting as a gauge, it appears the role of post-disaster creativity has been somewhat forgotten in recent years. A word search for ‘creativity’ in five articles reflecting on progress of the rebuild to commemorate the 7th anniversary of the February 22, 2011 earthquake did not produce a single mention of the word. Instead, progress was discussed in terms of business developments that have “dared to dream big and deliver handsomely” (Yardley, 2018). One year later, on the 8th anniversary, a Google news search using the words ‘Christchurch creativity’ did not result in any articles on the topic specifically.

It seems important that what creatively transpired should not be forgotten. In particular, in relation to what this study has revealed, that people will work together to create what is required to alleviate the needs of a disaster-affected community. This should be accounted for and respected in future disaster planning. Creative and adaptive individuals can be pre-prepared and characteristically

equipped to act pro-socially, independently or as a group, while others flail. As a disaster is the catalyst for both social processes and problems to be solved there should be acknowledgment that the social processes can be expected to lead to disaster-related problems being addressed. Pro-socially motivated, creative individuals, empowered and enabled by a spirit of recovery, channel their characteristics and skills to achieve for the benefit of others and, in doing so, themselves. This knowledge could have political ramifications. Future discussions should consider the role of political forces in disaster recovery. Cretney (2017) indicated this, along with hope for progressive change:

There is a need to situate the central role of neoliberal capitalism in shaping the values and practices of reconstruction and recovery, particularly through engagements with crisis politics. At the same time, disasters may open up space for contestation and resistance that allows for alternative and transformative forms of recovery politics. (p.1)

Dombroski et al. (2019) suggest disaster affected communities can change. Creative practice that involves ‘commoning’, or community members working together to produce common benefit, tends to result in actions viewed as being of temporary or transitional value. However, Dombroski et al. state there is “the potential to normalise practices of commoning for a wider range of people and institutions” (p.314). They remind us that this should be unsurprising given that, New Zealand, has the example set by “tangata whenua, the first people of the land, who have practiced forms of commoning for centuries” (p.318).

Another positive voice is that of Chessie Henry, author of *We Can Make a Life: a memoir of family, earthquakes and courage*, currently a writer for the Christchurch-based, creative venture supporting communications agency, Brown Bread. In a recent edition of *North and South* magazine, she said “Christchurch definitely feels like a place now where creativity is really thriving...I’m quite inspired by the feeling in the city” (Lever, 2020, p.?).

Even those whose personal post-quake suffering was particularly immense, like Ann Brower, the sole survivor on a public bus crushed by falling masonry on 22 February, 2011, said she enjoys spending time in the “new downtown”, finding it “safer and less dense”. There is much to appreciate in the rebuild: “Life was never meant to stay the same,” Brower said. “Recovery — that’s where you’re going back to where you were. You never fully recover from an earthquake. But that’s not necessarily a bad thing” (Lin II, 2019).

On a personal note, one evening recently in the home of a dear friend that (as it occurred to me later, was designed by a great creator lost during the violent shaking of February 22, 2011 – architect Donald (Don) Cowey), conversation amongst those of us who had experienced the over 13,000 earthquake aftershocks turned to the current experience of visiting Christchurch’s inner city. It was

agreed that a visit to the CBD confirmed that it was now rebuilt and revitalised, and not altogether uncreative despite an excess of 'boring' corporate style buildings that represented missed opportunities. There are still vacant sites to be seen, and buildings that look unclaimed, but the very hub of the city appears more vital than it did before the earthquake. Some of those around the table at which we sat had been involved in implementing creative ideas in the post-quake setting. We agreed that creativity and unique thinking had been successful, but that – nearly a decade after the first earthquake – what had needed to be done *was* done. Now, the need is to move forward with what has been learned about the benefits of creative approaches – the joy they can bring, as well as the needs they can meet. It seems important to recall and apply them to future thinking and planning, disaster or not.

When the earth moves, who moves with it? The answer may be the creative individuals who take the opportunity to act on their strengths and motivations, in spite of their weaknesses, to deliver benefits in a setting that without their efforts would be much grimmer.

*Ring the bells that still can ring
Forget your perfect offering
There is a crack in everything
That's how the light gets in*

Leonard Cohen, 'Anthem'

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Appendix A

THE NOVELTY–CREATIVITY TAXONOMY (Kaufmann, 2003)

Familiar Task- Familiar Solution	Novel Task – Familiar Solution	Familiar Task- Novel Solution	Novel Task – Novel Solution
(routine problem solving with standard operating procedures) = low creativity	(conceptual home base of intelligence proper) = adaptive intelligence	(degrees of novelty - setting may make it novel) = proactive creativity	- (real and important changes take place) = reactive creativity
	<ul style="list-style-type: none"> • <i>Charity-based design & adventure magazine</i> • <i>Fund raising organisation</i> • <i>Collaborating competitors</i> • <i>Female, strength-focused boot camp</i> • <i>Uber-recycling company</i> • <i>Ethical clothing company</i> • <i>Creativity enablers</i> • <i>Girls' sport charity</i> 	<ul style="list-style-type: none"> • <i>Inspired sculpture</i> • <i>alternative guide</i> • <i>home-based gallery</i> • <i>Makeshift gallery</i> • <i>Innovation hub</i> • <i>Mobile pub</i> • <i>Recycled pub</i> • <i>Post-quake fitness set ups</i> • <i>Art fair</i> • <i>Mobile restaurant</i> • <i>Living wall</i> • <i>Unique waste disposal</i> • <i>Media in a float</i> • <i>Unique charity</i> 	<ul style="list-style-type: none"> • <i>Unique entertainment service</i> • <i>Cinema service</i> • <i>Outdoor, foraging chef</i> • <i>Furniture from salvaged bush products</i> • <i>Large recycling project</i>

		<ul style="list-style-type: none"> • <i>Unique shopping centre</i> • <i>Storytelling venture</i> • <i>Street art</i> • <i>Unique landscapers</i> • <i>Outdoor public art</i> • <i>Moving theatre</i> • <i>Toy-based education</i> • <i>Artist</i> • <i>Poet</i> • <i>Sculpture</i> • <i>Guerrilla gardener</i> • <i>Sound artist</i> 	
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As the characteristics of the individuals who acted creatively in the setting is a key focus it was important to ascertain that ideas implemented can be considered *creative*. A level of creativity was attributed to each study participant's creative idea. This was completed in order to discuss each idea as *creative*. Kaufmann's taxonomy (2003) was used to categorise each creative output according to degrees of novelty and usefulness (Appendix A). Amongst the creative ideas of the study sample, the number considered more adaptive than creative (familiar task/novel solution) was greater than the number considered *highly* creative (novel task/novel solution). However, the greatest proportion of participant ideas, although not *highly* creative according to the taxonomy, were categorised as being more creative than they were adaptive (familiar task/novel solution). This shows that creative output from the post-earthquakes creators was, *overall*, more novel than adaptive. If the taxonomy is viewed as a continuum, more of the creative output seen was highly creative end than it was highly adaptive end. Or, in the language of creativity researchers, more original than useful.

Appendix B

Ten item personality inventory (TIPI)

Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
1	2	3	4	5	6	7

I see myself as:

1. _____ Extraverted, enthusiastic.
2. _____ Critical, quarrelsome.
3. _____ Dependable, self-disciplined.
4. _____ Anxious, easily upset.
5. _____ Open to new experiences, complex.
6. _____ Reserved, quiet.
7. _____ Sympathetic, warm.
8. _____ Disorganized, careless.
9. _____ Calm, emotionally stable.
10. _____ Conventional, uncreative.

Appendix C

TUPI Results

	<i>Extrav erted, enthusi astic</i>	<i>Critical, quarrel some</i>	<i>Depen dable, self- discipli ned</i>	<i>Anxi ous, easil y upse t</i>	<i>Open to new experi ences</i>	<i>Reser ved, quiet</i>	<i>Sympat hetic, warm</i>	<i>Disorga nised, careless</i>	<i>Calm, emotio nally stable</i>	<i>Convent ional, uncreati ve</i>
1	0	5 (11.6%)	0	6 (13.9 %)	0	6 (13.9 %)	0	6 (13.9%)	0	19 (44.1%)
2	1 (2.3%)	9 (20.9%)	1 (2.3%)	13 (30.2 %)	0	7 (16.2 %)	0	10 (23.5%)	5 (11.6%)	13 (30.2%)
3	3 (6.9%)	7 (16.2%)	1 (2.3%)	8 (18.6 %)	1 (2.3%)	8 (18.6 %)	1 (2.3%)	7 (16.2%)	2 (4.6%)	2 (4.6%)
4	6 (13.9%)	4 (9.3%)	2 (4.6%)	5 (11.6 %)	0	10 (23.5 %)	3 (6.9%)	8 (18.6%)	8 (18.6%)	6 (13.9%)
5	10 (23.25 %)	11(25.5 %)	6 (13.9%)	8 (18.6 %)	4 (9.3%)	7 (16.2 %)	11(25.5 %)	7 (16.2%)	11 (25.5%)	3 (6.9%)
6	12 (27.9)	5 (11.6%)	26 (60.4%)	1 (2.3 %)	16 (37.2%)	5 (11.6 %)	19 (44.1%)	2 (4.6%)	11(25. 5%)	0
7	11 (25.5)	2 (4.6%)	7 (16.2%)	2 (4.6 %)	22 (51.1%)	0	9 (20.9%)	3 (6.9%)	6 (13.9%)	0

The data from 43 participants has been collated and presented in the following table. Findings considered to be of particular significance are commented on below the table.

Appendix D

Ethics Approval

Application No: 2015-44

20 November 2015

Title: Influential factors in the enactment and sustainment of creative ideas in a post-disaster setting.

Applicant: T Agnew-Cameron

The Lincoln University Human Ethics Committee has reviewed the above noted application.

Thank you for your response to the questions which were forwarded to you on the Committee's behalf.

I am satisfied on the Committee's behalf that the issues of concern have been satisfactorily addressed. I am pleased to give final approval to your project.

Please note that this approval is valid for three years from today's date at which time you will need to reapply for renewal.

Once your field work has finished can you please advise the Human Ethics Secretary, Alison Hind, and confirm that you have complied with the terms of the ethical approval.

May I, on behalf of the Committee, wish you success in your research.

Yours sincerely



Grant Tavinor
Chair, Human Ethics Committee

PLEASE NOTE: The Human Ethics Committee has an audit process in place for applications. Please see 7.3 of the Human Ethics Committee Operating Procedures (ACHE) in the Lincoln University Policies and Procedures Manual for more information.

Appendix E

Interview Request Email Text

I am a PhD student and Senior Tutor at Lincoln University with a particular interest in creativity and its influences for community or societal good.

I am writing to ask if you would be willing to be interviewed about your creative work and influences, particularly in the post-disaster setting. Your comments and insights would be valuable and greatly appreciated.

Please see the attached information sheet which fully outlines the study and requirements.

If you would be willing to meet, please send a contact number and I will call you to arrange a time and place that suits you.

Kind regards,

Appendix F

Participant Information

Lincoln University
Faculty of Environment, Society and Design

Research Information

My name is Trudi Cameron-Agnew and I am a PhD student at Lincoln University.

You are invited to participate in my PhD study which is entitled

“Influential factors in the enactment and sustainment of creative ideas in a post-disaster setting”.

The aim of this study is to determine which personal qualities and external factors might have influenced the way in which people have pursued their creative ideas and projects for the benefit of either the community or business, or both, in post-earthquake Christchurch. I am also interested in what might have hindered or supported this process of putting into practice creative ideas and projects and any resulting success.

Participation is entirely voluntary and would involve spending approximately one hour responding to interview questions about your creative idea or venture. While I may need to get back to you to clarify some of your answers to the questions, there are no anticipated follow-up activities associated with this study.

There are no foreseen risks associated with this project, however – in asking about the factors that were influential – you may be asked about your personal history and experiences. You can refuse to answer any question and, of course, choose what you share.

There will also be questions about your experience during and after the earthquakes. I realise this may be difficult for some people so I will make especially sure that you are comfortable with answering these questions.

As mentioned above, participation is voluntary. Further, you would be free to withdraw from the project at any stage, including withdrawal of any information provided, up to 31 December, 2016.

I will ask if I can record the interview but this will only be done with your consent.

The results of the project may be published, but you may be assured of your anonymity in this investigation: the identity of any participant will not be made public, or made known to any person other than the researcher, or her supervisors and the Human Ethics Committee, without the participant’s consent. To ensure your anonymity the following steps will be taken:

- A pseudonym or code will be used when transcribing and writing about any specific details relating to any participant.
- Data will be kept on a computer file requiring a password to access it.

The project is being carried out by:

Name of principal researcher: Trudi Cameron-Agnew

Contact details Trudi.Cameron-Agnew@lincoln.ac.nz ph: 423 0147 or 021 228 8624

I will be pleased to discuss any concerns you have about participation in the project. Alternatively, you can at any time contact my main Supervisor:

Dr Kevin Moore, Associate Professor, Faculty of Environment, Society and Design

Contact Details Kevin.Moore@lincoln.ac.nz ph:423-0496

The project has been reviewed and approved by the Lincoln University Human Ethics Committee.

Appendix G

Consent Form

Name of Project: ***Influential factors in the enactment and sustainment of creative ideas in a post-disaster setting.***

I have read and understood the description of the above-named project. On this basis I agree to participate as a respondent in the project, and I consent to publication of the results of the project with the understanding that anonymity will be preserved. I understand also that I may withdraw from the project (up until December 31, 2016), including withdrawal of any information I have provided.

I consent to the interview being recorded on an audio device ☐

Name: _____

Signed: _____

Date: _____

Appendix H

Interview Question Guide

Self

1. How would you describe yourself? As in what characteristics do you have that you think contribute to your creativity?
2. What do you do for occupation? In what ways does your occupation allow you to be creative?
3. Describe other creative ideas you have had in the past? Were they enacted? Developed? Successful?
4. Tell me about what influenced you or inspired you creatively as a child or young person?
5. Where were you born?
6. Do you have older or younger siblings?
7. What can you tell me about your education?
8. In what ways do you perceive your educational process encouraged or hindered your desire to act creatively?
9. What aspect of your personality are you most proud of and why?
10. In what ways, if any, might other people you know describe you differently from how you see yourself?
11. Married? Partner? And do you have any children?
12. In what ways have those close to you been involved in helping to develop your idea?
13. Your parents? What line of work were each of them in? Creative?
14. Tell me about people who have inspired or influenced you?
15. How has travel influenced you? What other countries have you visited? Enjoyed? Not?
16. Any negative or discouraging experiences related to acting on your creativity?

Earthquake Experience

17. Can you tell me about your experiences during and after the major earthquakes?
18. Were you in Christchurch during the earthquakes of 2010 and 2011? All of them? (If not, ask about response their response from afar)
19. How did the earthquakes affect you personally? Financially, work/businesswise?

Idea/Venture

- 20. Describe the idea / venture?
- 21. How did the idea come to you?
- 22. In what ways did the post-quake environment lead to the *generation* of your creative idea /venture?
- 23. Why did you decide to go ahead with it?
- 24. In what ways did the post-quake environment influence your *decision to act* on your idea? (

Supporting or Hindering Factors

- 25. What factors do you perceive contributed most to the successful aspects of this project/idea/venture?
- 26. What factors do you perceive hindered – or presented obstacles – during the enactment or development of the venture? (If the above questions don't lead to much, ask specifically about peers, family, community, organisation, government dept., council etc)
- 27. Do you mind telling me your age?
- 28. Explain in what ways you think your age (stage of life) had any impact on your decision to enact your idea?
- 29. Gender? Perception that it led to any advantages or disadvantages? (will be careful with this one, but I know it to be worthy of investigation)

Outcome

- 30. In what ways, would you say your project succeeded?
- 31. What did you hope would be the ultimate outcome of what you enacted? What did you dream would happen?
- 32. Describe anything you were afraid of when you began the project? (looking for fear of failure, risk, what people would think, financial ruin....etc)
- 33. What was the ultimate outcome, or what is the outcome at this point?
- 34. Did the project meet your expectations? Goal?
- 35. Why or why not? (If not already discussed)
- 36. Which parties do you perceive have benefitted from your idea enactment? (expand on this: self, family, friends, community, city, country, world...)

Appendix I

Research Output

Journal Articles

Cameron, T., Montgomery, R., Moore, K., & Stewart, E. (2018). Swimming with ideas: what happens to creativity in the wake of a disaster and the waves of pro-social recovery behaviour that follow?. *Creativity Studies*, 11(1), 10-23.

Cameron, T., Moore, K., Montgomery, R., & Stewart, E. J. (2018). Creative ventures and the personalities that activate them in a post-disaster setting. *Creativity and Innovation Management*, 27(3), 335-347.

Conference Proceedings/ Presentations

What impact might the post-disaster setting have on creative tendencies, the ability to enact creative ideas and the ability to sustain those ideas? Poster presentation. People in Disasters Conference, Christchurch. 24-26 February 2016

The impact of the environment of post-earthquakes Christchurch on creative idea enactment: enablers and obstacles. Published in proceedings and presentation. The 6th International conference on Building Resilience, University of Auckland. 7 – 9th September, 2016.

What happens to creativity in disaster situation? Presentation, Creative society: ideas, problems and concepts. Florence, Italy. March 13-14, 2017.

Post-disaster creative idea activation: who's ready? Presentation. SAANZ 2017. Respect Existence or Expect Resistance 6-10 December 2017. University of Otago

Post-disaster creativity enactment: Who's ready? Presentation. Creativity conference, Southern Oregon University, Oregon, USA. 3 – 6 August, 2018.

Other Presentations

Send in the Clowns: Preparing for Institutional Panic after a Disaster Event. Co-presented with Roy Montgomery. Royal Society Te Apārangi 150th Anniversary Regional Lecture Responding to earthquakes - future perspectives, Christchurch. 2 August, 2016

'Creativity research and lessons for Learning and Development'. Presented by invitation to meeting of New Zealand Association of Training & Development (NZATD), Ilam Homestead, University of Canterbury. 1 February, 2017

Visiting scholar and research discussions and presentations. Disaster Research Center, University of Delaware, Newark, USA. 17-18 October, 2017